STATE OF WASHINGTON

OFFICE OF FINANCIAL MANAGEMENT

Insurance Building, PO Box 43113 • Olympia, Washington 98504-3113 • (360) 902-0555

February 16, 2007

Dear Readers of the Roadmap Feasibility Study,

The executive sponsors of the *Roadmap* program commissioned this feasibility study in June 2006 to help lay out the choices and options for the future of the state's "back office" financial and administrative business policies, processes, data and systems.

We appreciate the many hours spent, the thoughtful work done, and the large effort made by agency staff who contributed to this work. This could not have been done without your help and input.

This document represents the best thinking we have – so far. It includes expert recommendations and advice for state policy makers and executives that will help guide the choices that the state of Washington will need to make in the future. While this study makes a substantial contribution to our knowledge and will inform our judgments as we chart the future direction for the state, it will not be the sole source of guidance as there are many additional factors to consider.

Eclipse Solutions prepared this feasibility study with the assistance of business and technical experts from various agencies and the *Roadmap* project team. The study specifically addresses these business areas:

- General ledger and financial reporting
- Cost accounting
- Decision support
- Performance measurement
- Purchase order to pay

The executive sponsors and advisory group members, among many others, commented on numerous earlier drafts. Every effort has been made to incorporate this feedback where ever possible. There will be many other opportunities for additional comment and involvement as we move forward to deal with the issues and choices represented in this report. Unless otherwise noted, references in this document to "agencies" only apply to non higher education agencies.

Thank you again for your help. Should you have questions or comments about the feasibility study they should be directed to Sadie Rodriguez-Hawkins at 360 664-7650, or sadie.hawkins@ofm.wa.gov.

Milestone 4 of the Foundation Planning Phase of the *Roadmap* Program

State of Washington

Office of Financial Management

Feasibility Study

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1. EXECUTIVE SUMMARY

In early 2004, the Office of Financial Management together with the Departments of Information Services (DIS), General Administration (GA), and Personnel (DOP) initiated a project called the '*Roadmap* for Financial and Administrative Policies, Processes, Systems, and Data' (*Roadmap*). Working with the following executive sponsors: Linda Bremer, GA; Wolfgang Opitz, OFM; Gary Robinson, DIS; Eva Santos, DOP and a 17 agency advisory group, the *Roadmap* team began developing a comprehensive plan for the incremental transformation of the state's financial and administrative or "back office" policies, processes, systems, and data. This feasibility study represents a body of work done in support of establishing a strategic financial and administrative vision and direction for the State of Washington.

Since 2004, the *Roadmap* team has worked with executive sponsors and the advisory group to:

- Understand and prioritize the agencies' common business problems
- Develop a long-range timeline and solutions framework for addressing the most critical needs
- Propose future business processes, data models
- Identify preliminary policy revisions and data standardization to support each significant change

Through these efforts, a total of fifteen core financial and administrative processes were identified as key to Washington State. The fifteen processes were further broken down into over fifty supporting functions and activities. Business process modeling and future state visioning efforts were completed, involving 168 business experts from twenty-four agencies in a series of half-day sessions over a ten month period. The five business processes considered within the scope of this Feasibility Study include:

- General ledger and financial reporting
- Cost accounting (including the cost of labor aspects of Human Resource Management)
- Decision support
- Performance measurement
- Purchase order to pay (Payee Identification Management, Order Management, and Payables Accounting)

Problem Statements

Against the challenge of continuing growth and change, the existing statewide and agency-owned financial and administrative systems are doing a reasonably good job of performing the functions they were designed to do for their organizations. However, these same systems are being asked to respond to new demands that cross organizational boundaries, including cost accounting, performance measurement, and independent assessments of program and service effectiveness.

Research shows that twenty-seven other states in similar circumstances have adopted Enterprise Resource Planning (ERP) solutions. Washington State recently implemented

a Human Resource ERP solution but remains one of sixteen states that relies primarily on legacy financial management systems (See Volume II, Appendix A).

State of Washington is at the crossroads between 20th century tools and 21st century needs – it must position itself for the future. In response to new demands, the state of Washington is faced with three significant problems:

1. **It is difficult and labor intensive to capture, prepare, respond, track, and monitor performance information.**
   - Existing financial data and information does not support or align with needed performance information; in particular, non-financial data cannot be easily captured or tracked using existing systems. The few systems that have the needed financial information require a significant amount of staff time to compare or exchange the information. In many cases, the performance information simply does not exist. Complicating the situation, many existing system interfaces in state government are difficult to maintain and require significant resources to support.

2. **A few agencies have the capacity and resources to position themselves to meet their specific needs and to support some of the State's major initiatives; most agencies do not have this capacity.**
   - Agencies with adequate dedicated revenue sources have historically planned and implemented their own core systems tailored to meet agency-specific business needs. Other agencies without such resources have been left to make do with other less-efficient methods and systems, often manual and labor intensive. Given these circumstances this disparity in capacity and resources is not going to change, however implementation of improved statewide systems should help level the playing field for all agencies. If not addressed, the disparity between the have and have-nots will continue to widen, and lost agency investment opportunities will occur.

3. **It is anticipated that the state will continue to experience a significant loss of the institutional knowledge required to support and enhance existing business systems.**
   - According to the Washington State Department of Personnel, 64% of Washington State employees will be eligible to retire in the next 10 years. Agencies will be challenged to replace these highly skilled and experienced employees. At the same time, successful implementation of major system changes and enhancements requires people who understand the state's laws, business needs, policies, processes, systems, and data. Failure to have this understanding will only increase the cost and risk for any project. The state is already totally dependent on current employees to maintain the Agency Financial Reporting System (AFRS), which is on a platform no longer supported by a vendor.

Washington's Business and Technical Environment

Washington's state government operates by delegating a considerable degree of business and management flexibility and independence to each state agency. This autonomy provides flexibility to meet unique business needs in conjunction with delivering the specific mission of each agency.

Excluding higher-education, there are more than 140 agency-based systems (and supporting infrastructures)[1] needed to support the various financial functions. No less than fourteen agencies have their own accounts payable systems and as many as six have their own general ledger. This creates challenges in analyzing, comparing, reporting, improving, reconciling, and accounting for state service and program results, both from an agency-to-agency and at a statewide level.

In terms of criticality to financial accounting and reporting, AFRS is the most significant legacy system and it is without vendor support. While AFRS contains payment functionality and tracking capabilities, agencies that receive the majority of funds from outside sources have their own systems to record revenue. Consequently, AFRS data is relatively "rich" in payment detail (such as vendor) but lacks revenue detail (such as customer).

Alternatives Considered

Based on work completed, the following three alternatives were considered:

- ***Status Quo*** – This alternative represents the course the state is currently on. Individual agencies would continue to make necessary policies, processes, and system changes in accordance with, and in response to, state mandates and directives. At the statewide level, state and agency policies, processes, and purchases of and investments in systems would continue to evolve individually in response to emerging needs.
- ***Leverage AFRS*** – This alternative would continue to deliberately build new functionality around the state's existing financial management system, AFRS. Statewide policies, organizational structures, processes, and systems would be reviewed and enhanced to support enterprise and agency visibility and management. Additional functionality would be added or built to existing AFRS and Enterprise Reporting systems, including the acquisition of commercial packages to further support enhanced policies, organizational structures, and processes (i.e. cost accounting and performance measurement).
- ***Leverage HRMS –*** This alternative would purchase the licenses necessary to implement the financial and administrative modules of the current SAP software, thus extending the state's existing investment and deployment of ERP technology. Statewide policies, organizational structures, processes, systems and data would need review for conformance with SAP processes and business rules.

Each of these alternatives was evaluated based on two types of assessment:

- Evaluative ranking assessment – Assessed and ranked each alternative against three categories: needs/value, worth 50 possible points; risk, worth 10 possible points; and cost, worth 40 possible points.
- Advantages and disadvantages assessment – Assessed each alternative versus the following criteria: alignment with Enterprise Objectives; perceived agency flexibility and independence; agency resource capacity; agency equality;

[1] As reported in the "2006 Baseline Cost Survey" conducted during Milestone 4.

duplicative effort; enterprise best practices; technology relevance and stability; and level of change.

The results of the evaluative ranking assessments were used by the project team only to identify which of the three alternatives were considered viable. Once viable alternatives were identified, the alternatives were further reviewed to understand how other factors influenced the final selection. Specifically, each viable alternative was further evaluated to determine: impact on other efforts underway, lessons learned from the HRMS project, lessons learned from other states, and industry best practices.

Based on the experience of the HRMS project, specific cost benefits were not determined at this time. Only project costs were identified and included in this study. Given that the earliest time the implementation could start would be 2011, the Executive Sponsors and the Project Team believe that benefits measured at this point would not only be inaccurate but would be misleading if used as an alternatives selection criteria.

Recommended Alternative

Status Quo was not considered a viable option as it did not fully support the vision for an enterprise system; it also failed to realize the benefits of consistent processes, measures, and data definitions in the foreseeable future. In addition, the legacy systems that the state currently uses to conduct business are no longer vendor supported, difficult to modify and support new and changing business requirements, and require significant investments and upgrades.

While Leverage AFRS was considered a strong viable option, it was not found to be the most desirable option to pursue for several reasons. This alternative does not meet some of the key Enterprise Objectives, nor does it best position the state of Washington for the future. This alternative does not: eliminate maintenance of redundant data; standardize processes across various state systems; nor does it adopt industry financial and administrative best practices or address the disparity between agencies (haves and have-nots). **Leverage AFRS** would also significantly increase the complexity of the technical environment, specifically in the areas of interfaces and a mix of technical architectures.

Even though both **Leverage AFRS** and **Leverage HRMS** were considered viable options, **Leverage HRMS** was found to best meet the Enterprise Objectives in positioning the state for the future and meeting the resource challenges it is facing. In particular, **Leverage HRMS** has the best chance of significantly addressing broader functionality needs; eliminating silos of data and functionality; encouraging standard approaches; reducing technical complexity, and significantly increasing the degree to which Washington can leverage enterprise technology.

Implementation Phasing

Implementation of the recommended alternative will be one of the most significant business transformation projects ever undertaken by the State of Washington and should be treated accordingly. Developing a sound implementation approach is a critical aspect of project preparation and planning, and can help control risks by phasing in functionality and agency end users gradually. The outline below presents an overview of a proposed 3-phase implementation sequence:

- **Phase 1 – Positioning Activities**
  - July 2007 through June 2009 – Stabilize HRMS and AFRS interfaces; further define enterprise and state direction; expand existing governance structure to

be more program-oriented; complete chart of accounts and common data definition analysis to determine degree of consistent data requirements; review state procurement rules, policies, and procedures and identify areas for potential streamlining; complete, or remain engaged in, the implementation of major agency line-of business systems; move agencies toward established standards and approaches through review of existing laws, policies and processes; analyze and document existing interface/integration; begin preparations for the implementation of a strong Change Management Program; begin assessment of agency capacity and readiness; incorporate lessons learned from other states and HRMS implementation; establish an Enterprise Program Office (EPO); and as time permits, develop detailed requirements.

Note: Not all of these efforts will be completed during the 2007-09 Biennium; however, all should be underway.

- **Phase 2 – Design and Configuration Activities**
  - July 2009 through January 2011 – before entering into Phase II, it will be critical that the EPO validates the readiness and capacity of the enterprise and individual agencies to move forward. Upon completion of the readiness assessment the EPO will seek *Roadmap* Steering Committee approval to proceed with the following activities: design a blueprint of the solution; conduct a fit gap analysis, including other system interfaces; continue policy and process re-engineering; continue program development, change management, and implementation planning; design and implement enterprise integration with other independent systems (for example, treasury and payroll); identify data conversion needs, plan the approach, configure and build the new solution in pilot mode, thoroughly test the pilot solution and interfaces, conduct initial data conversion, complete initial end-user training.
- **Phase 3 – Agency Migration Activities**
  - January 2011 through June 2012 – before entering into Phase III, it will be critical that the EPO validates the readiness and capacity of the enterprise and individual agencies to move forward. Upon completion of the readiness assessment the EPO will seek *Roadmap* Steering Committee approval to proceed with the following activities: Establish a "Target" ERP environment; continue running AFRS and HRMS "as-is" systems; freeze all changes to these systems, conduct initial data conversion according to plan, deploy new financial environment based on new chart of accounts structure including new general ledger and redesigned HRMS, bridge AFRS and HRMS to new financial environment for reporting, bridge existing AFRS file based interfaces to new financial environment, and implement processes for posting batch updates from agency financial systems, test all financial reports, test all payroll reports and processes, certify new environment for financial reporting and HR payroll, go live with HR payroll from the new ERP environment; go live with financial reporting from new ERP environment, begin transition of AFRS users to new ERP environment, enter stabilization period for new ERP environment, upon validation and stabilization of the new, financial and HRMS environment, begin retiring the "as-is" AFRS and HRMS environments.

Benefits

There are significant business benefits that would result form the implementation of the Leverage HRMS alternative. For example, some key benefits that will be achieved over time would be:

- Timely access to program outcome information, leading to more timely and accurate measures of performance
- Comparable financial and performance information across programs and agencies
- Economies of scale from adoption of shared services
- Enhanced flexibility to meet significant and ongoing changes expected in Washington's financial and administrative system needs throughout the coming years (e.g. improved ability to meet legislative and federal timelines and mandates for new laws and modifications of existing laws or policies)

2. BACKGROUND

Over the past six years, Washington State has become a recognized leader in budgeting, civil service reform, management, and accountability programs. These, coupled with significant changes in laws and policies, have spurred innovations and change. For example:

- In 2002, the Personnel System Reform Act (PSRA) instituted sweeping reforms to the state's civil service system, expanded collective bargaining agreements to include wages and benefits, and created new options for the state to competitively contract work done historically and traditionally by state employees.
- In 2003, the Office of Financial Management (OFM) introduced a new strategic budget planning framework called 'Priorities of Government' (POG). Used successfully for the past two budget cycles, POG develops budget priorities aimed at delivering the services that matter most to the people of Washington. This innovative budgeting approach was honored as a finalist in the '2005 Innovations in American Government' awards sponsored by Harvard University.
- In 2004, Governor Christine Gregoire instituted the Government Management Accountability and Performance (GMAP) program. A logical extension to the new budgeting process, the GMAP program is holding state agencies accountable for delivering results. This program enables the Governor to evaluate program results and make course corrections in over time.
- In 2005, the citizens of Washington passed an initiative that requires independent, comprehensive performance audits of state and local government. Coupled with the three initiatives mentioned above, the performance audit process is intended to drive agency cost savings by identifying services that can be reduced, eliminated, or transferred to the private sector, implementing best practices and pooling agency IT systems, among other approaches.
- In 2006, the new HRMS was implemented in three phases with the last group of agencies making the transition to the new system in July 2006. The new system has placed some unexpected resource demands on agencies, such as manually entering data daily into the new payroll system and closely monitoring the results to ensure that deductions are calculated and posted correctly and those employees are being paid accurately.

Additionally, we are proud to report that Washington State has been the recipient of the Government Finance Officers Association Certificate of Achievement in Financial Reporting for the past 19 years. This award is the highest form of recognition in the area of Governmental Accounting and Financial Reporting and represents a significant accomplishment for a state and its management.

In keeping with Washington's history of being forward-looking, the OFM together with the Departments of Information Services (DIS), General Administration (GA), and Personnel (DOP) initiated a project in early 2004 called the '*Roadmap* for Financial and Administrative Policies, Processes, Systems, and Data' (*Roadmap*). Working with the following executive sponsors: Linda Bremer, GA; Wolfgang Opitz, OFM; Gary Robinson, DIS; Eva Santos, DOP and a 17 agency advisory group, the *Roadmap* team began developing a comprehensive plan for the incremental transformation of the state's "back office" policies, processes, systems, and data.

This feasibility study represents a body of work done in support of establishing a strategic financial and administrative vision and direction for the state of Washington.

2.1 THE ROADMAP PROGRAM

Since 2004, the *Roadmap* team has worked with sponsors and the advisory group to:

- Understand and prioritize the agencies' common business problems
- Develop a long-range timeline and solutions framework for addressing the most critical needs
- Propose future business processes, data models
- Identify preliminary policy revisions and data standardization to support each significant change

Washington State's *Roadmap* program provides the transparency and accountability that citizens demand of government. It is intended to earn public trust and confidence by achieving measurable results. It will continue to ensure that tax dollars are spent wisely. It promotes an enterprise perspective on business and administrative functions, sharing systems that support common functionality, and making investments that benefit all state agencies. It is about transforming how Washington State government does its business. It is an approach to find and sustain the balance between cost and quality, current and future needs, fiduciary responsibility, and effective operations.

The *Roadmap* envisions a government founded on modern financial and administrative policies, processes, systems and data that deliver full value to the real work of government. It seeks to transform state government by making improvements to the "back office" tasks that make the "front office" happen and answer questions from the "corner office".

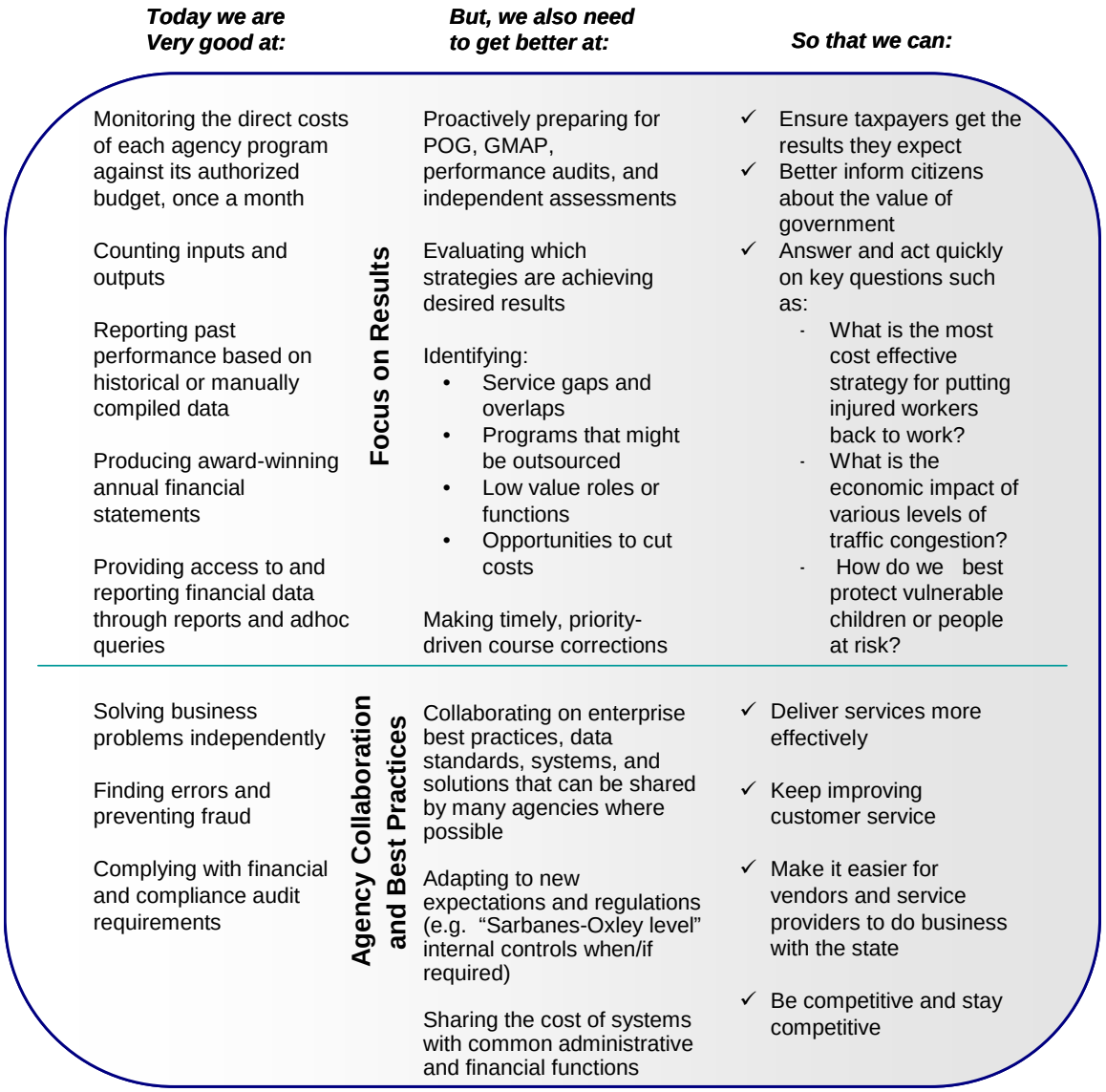
To make this vision a reality, state employees must be able to view and link financial, program, unit cost, vendor, order, grant, contract, activity, and results information. This information needs to be accessible at multiple levels of detail using powerful, user-friendly query and reporting tools. In short, state agencies need the right information gathering tools, a flexible, robust data model, and strong reporting capabilities.

The *Roadmap* will help state employees respond in a timely manner to the needs of citizens by making the best use of resources to deliver efficient and effective programs and services where they are most needed and add the most value.

2.2 BUSINESS VISION OVERVIEW

This future vision calls for redefining the state's operational culture. Currently, Washington's financial and administrative functions focus on making sure employees do things well within agency boundaries. The *Roadmap* requires that agencies and their employees deliver measurable results by doing the right things for the state. Figure 1 depicts the cultural changes the *Roadmap* effort is seeking to accomplish.

Figure 1: Overview of Business Vision



This vision recognizes that disciplined management of the state's resources is essential to the effective delivery of program services and the development of a trusting relationship between citizens and the state. Therefore, it is important to ensure we have the right policies, processes, systems, and data to deliver the strategic, responsive, and accountable government that citizens demand. A comparison of today's state of operations versus the one envisioned for the future is shown in Table 1.

Table 1: Current versus Envisioned Business Environment

Current	Envisioned
Run agencies efficiently	Run the state efficiently and effectively
Gather and protect information	Facilitate information sharing in a responsible fashion
Provide services for agency customers	Help agencies succeed Deliver services to citizens
Create solutions to address agency needs	Share solutions that meet common statewide needs
Establish policies for specific programs	Establish enterprise policies based on best practices
Establish statewide policies and procedures and utilize a statewide chart of accounts	Enhance statewide and agency visibility

The first phase of the *Roadmap* program consisted of the milestones shown in Table 2 below:

Table 2: Roadmap Milestones

Milestone	Status
1. Identify and prioritize common business problems and opportunities. Develop high-level business case for improved business strategies	Completed 2004
2. Develop solutions framework, urgent business needs strategy, and shared services delivery vision	Completed 2005
3. Model Business Processes – document current business practices, propose future state business process and data models, and recommend policy revisions and data standardization when necessary to support each significant change	Completed 2006
4. Write the Feasibility Study for the *Roadmap* Core Financials project	June 2006 through February 2007

2.3 FEASIBILITY STUDY SCOPE

In Milestones 1 through 3, a total of fifteen core financial and administrative processes were identified. The fifteen processes were further broken down into over fifty supporting functions and activities. These business process modeling and future state

visioning efforts involved 168 business experts from twenty-four agencies in a series of half-day sessions over a ten month period.

As the business process modeling progressed and HRMS was implemented, the *Roadmap* Executive Sponsors realized that the core financial business functions would make the logical foundation and starting point for the upcoming *Roadmap* project initiative.

The five business processes considered within the scope of this Feasibility Study include:

- General ledger and financial reporting
- Cost accounting (including the cost of labor aspects of Human Resource Management)
- Decision support
- Performance measurement
- Purchase order to pay (Payee identification management, order management, and payables accounting)

2.4 CURRENT ENVIRONMENT

Washington's decentralized environment makes it difficult to support the levels of significant change needed to achieve *Roadmap* goals and other related business objectives for the future of the state's financial and administrative management.

This current environment operates under a combination of inconsistent and sometimes incompatible laws, policies, processes, systems, and data. Some are under the control and management of central service agencies, while others are under the control of individual state agencies. As a result, it is challenging for the state to:

- Determine and compare the full costs and results for programs statewide
- Avoid duplication of common functionality in multiple systems
- Provide all agencies with basic administrative and financial systems
- Respond to performance audit requests
- Understand, in "real time", the unit cost of results achieved
- Collaborate on service delivery strategies across agencies
- Support GMAP and Performance Measurement requirements
- Enforce shared processes and implement best practices statewide
- Compile statewide financial and performance information to support strategic decisions such as targeting resources to the highest risk/need areas
- Make timely, priority-driven course corrections
- Leverage the state's purchasing power

Without a concerted effort to change, the current environment continues to evolve in an independent fashion. It continues to develop single solutions to common problems and opportunities, resulting in a complex business and technical environment. In addition,

limited resources are being asked to support a multitude of initiatives that may or may not be addressing opportunities to share data/information across the enterprise.

Research shows that twenty-seven other states in similar circumstances have adopted Enterprise Resource Planning (ERP) solutions (See Volume II, Appendix A). Washington State recently implemented a Human Resource ERP solution but remains one of sixteen states that relies primarily on legacy financial management systems. Unfortunately, 20th century solutions cannot meet 21st century needs.

State executives and managers could benefit greatly by implementing appropriate policies, processes, systems, and data needed to plan strategically. This would allow them to be responsive, accountable, and efficiently achieve Washington's strategic vision.

2.5 WASHINGTON'S BUSINESS ENVIRONMENT

Washington's state government delegates a considerable degree of business and management flexibility and independence to each state agency. This autonomy provides flexibility to meet unique business needs in conjunction with delivering the specific mission of each agency. However, autonomy often comes at the expense of enterprise-based economies of scale, shared policies and standards, and cross-agency reporting capabilities.

Today, excluding higher education, there are more than 140 agency-based systems (and supporting infrastructures)[2] needed to support the various *Roadmap* financial functions. No less than fourteen state agencies have their own accounts payable systems and as many as six have their own general ledger. This environment creates challenges in analyzing, comparing, reporting, improving, reconciling, and accounting for state service and program results both from an agency-to-agency perspective and a statewide level.

Key issues and constraints within the current business environment include:

- **Performance Measurement** – Agencies capture performance measurement data separately from financial data, making it a challenge to align dollars spent with expected results or outcomes. Program and service data are organized by agency within line-of-business systems and applications of various kinds, in varying formats with inconsistent data definitions.
- **Cost Accounting –** Agencies use a variety of tools and methods to determine costs for programs, grants, and budget activities. Statutes sometimes require specific accounting treatment for certain direct and indirect costs for particular programs.
- **Financial Reporting and Decision Support –** The state's chart of accounts was designed to track spending for fiscal compliance, allow managers to monitor their budgets, have enough flexibility to accommodate different business needs and enough structure to allow statewide reporting of financial information. Agencies have made significant investments in a variety of agency-unique systems and desktop tools to record information based on internal policies and priorities that support their needs for detailed financial information. Agency-

[2] As reported in the "*Roadmap* 2006 Baseline Cost Survey" conducted during Milestone 4.

based financial systems are often redundant and are usually supported by batch interfaces where timing differences and data definition inconsistencies can result in conflicting versions of the information.

Financial reporting tools are primarily application specific and do not always support cross-application, cross-agency, and cross-functional reporting. Agencies spend millions each year maintaining data stores, interrelating data from multiple stores, and compiling and reformatting data for budget preparation, financial compliance, and performance measurement purposes. Financial transactions do not necessarily capture all the information managers, law and policy makers need to make decisions. As a result, responding to ad hoc requests for information can often be very labor intensive.

- **Procure to Pay** – In keeping with a long tradition of autonomy, agencies generally order, receive, and pay for goods and services independently from one another. The actual payment process (generating the warrants) can be done using AFRS, which provides payment processing via electronic funds transfer or paper warrant/remittance advice. However, AFRS does not support requisition and purchase order functions.

  Agencies have varying degrees of automation to support activities that precede the actual disbursement function. Some agencies have automated order-entry systems that are used to document the receipt of goods and services, while others scan invoices into images and route them electronically for approval. A wide variety of agency rules and policies have been established over the years to guide the accounts payable process and ensure that state funds are disbursed appropriately.

In spite of all this autonomy business process modeling confirmed that, for the most part, agencies *share the same business objectives for their financial, administrative, and sometimes even program* functions. This further supports the vision driving the *Roadmap* project – better information, improved management systems and streamlined business processes and policies.

2.6 WASHINGTON'S INFORMATION TECHNOLOGY LANDSCAPE

The state of Washington is a dynamic enterprise and has long been recognized as a leader in promoting the use of technology to improve the delivery of public services. At any point in time, the state will be actively involved in rolling out some major technology investment initiatives. Any major state government initiative such as *Roadmap* needs to be viewed in this context. Key questions for the *Roadmap* program to consider include:

- What other efforts are underway or planned that may impact how we view identified alternatives or proposed *Roadmap* initiatives?
- What are agencies doing in the area of finance and performance measurement that could impact this effort?
- What role should the *Roadmap* program play in any of these efforts?

Answers to these questions will directly influence the ability of the state to successfully deliver on the vision of *Roadmap* (or any major initiative) because they affect capacity – capacity of available investment dollars, staff resources, changing current business processes, and political will.

Any discussion regarding the IT landscape in Washington would not be complete without inclusion of the Information Services Board (ISB). The ISB consists of fifteen-members including technology leaders from the executive, judicial, and legislative branches, the Superintendent of Public Instruction, a representative from higher education, a statewide elected official other than the Governor, and members from the private sector. Eight members are appointed by the Governor.

To better understand the current IT landscape in Washington, high-risk (Level 3) projects monitored by the ISB were considered for their impact. A current list of these projects is shown in Table 3 below.

Table 3: Major IT Initiatives[3]

Level 3 Projects	Description	Project Schedule		
		Original	Approved Change	Projected End Date
CIS HP3000 Re-hosting Project Phase I	Migrate colleges' administrative applications off the HP3000 to a Windows .NET / Intel platform.	6/30/05		
DOC OMNI Phase III	Replace existing offender management and tracking system.	6/30/07	3/31/08	3/31/08
DOL HP3000 Re-platforming	Replatform the vehicle field system from the HP3000 to Windows .NET /Intel platform.	6/30/07		
DOT PMRS	Replace existing legacy systems for project management tracking and the tracking of highway project delivery.	9/28/07		
DSHS ProviderOne	Replace existing Medicaid system and legacy payment system (SSPS).	12/31/06	12/31/07	12/31/07
DSHS SACWIS	Replace existing mainframe children's case management system.	5/1/07		
HCA BAIAS	Replace existing, aging benefits administration and insurance accounting system.	6/30/08		
Insurance Commissioner SIMBA	Migrate OIC applications off HP3000 and make business process improvements.	12/29/06	6/30/07	6/30/07
UW ORCA	Implement electronic medical records at UW Medicine, Harborview, and SCCA.	6/30/06	1/31/07	
UW Workforce Management System Project	Human resource management functionality.	3/31/03		
WSP IWN – East	Convert portions of WSP analog radio network to digital in partnership with US Department of Justice.	6/30/06	12/31/07	12/31/07

As noted earlier, the implementation of HRMS is a current major initiative sponsored by the DOP. This project has been a huge undertaking for the State since 2004 involving hundreds of staff from virtually every state agency.

As noted in Table 3, the Health Care Authority (HCA) is positioned to replace one of its core systems, the Benefit Administration and Insurance Accounting System (BAIAS). This effort will also be far-reaching since it provides services for all state agencies and every higher education institution and affordable health care for qualifying citizens.

[3] Based on ISB list dated November, 2006.

While not included in the table above, it bears mentioning that the Washington State Department of Transportation (WSDOT) recently completed a Critical Application Study which will result in the replacement of aging financial system. WSDOT is the third-largest state agency with over 7,400 employees and a massive capital investment program. Replacing the WSDOT's financial system will be a major initiative and investment for Washington State, not just WSDOT.

In addition, DIS continuously plans and implements various initiatives designed to improve and extend the overall capabilities of the state's computing and telecommunications infrastructure. These and other initiatives will continue to emerge and potentially change the environment in which the *Roadmap* solution is launched.

2.7 TECHNICAL ENVIRONMENT

During the preparation of this feasibility study, the *Roadmap* team focused on seven core OFM statewide systems that support financial and administrative management and performance measurement functions. These systems include the following:

Mainframe-Based

- **Agency Financial Reporting System (AFRS)** – AFRS is the official WA State financial and reporting system. It contains the core general ledger and payables transaction management, and budget allotment system; it also is used to produce the Washington State Comprehensive Annual Financial Report (CAFR).

  AFRS is the most significant application for financial accounting and reporting. By law, state agencies and higher education institutions are required to record their financial activity in AFRS at a minimal level as required by the Statewide Accounting and Administrative Manual (SAAM). Agency accounting staff use AFRS to post accounting entries and trigger payments to various internal and external entities. The larger agencies, including all higher education institutions that have their own financial management systems typically send summaries of financial transactions into AFRS, either via electronic interfaces (file transfers) or by performing manual AFRS journal entries.

  While AFRS contains payment functionality and tracking capabilities, agencies that receive the majority of funds from outside sources have their own systems to record revenue. Consequently, AFRS data is relatively "rich" in payment detail (such as vendor) but lacks revenue detail (such as customer).

  The AFRS application itself was installed in the early 1980's and is based on the former KPMG STARS financial accounting system. While the vendor no longer supports the system, it is still used today in a least seven other states (including Oregon and California). KPMG sold the software and support agreements for the system to separate companies about ten years ago. Consequently, the software base of AFRS has not benefited from continuous vendor research and development (R&D) investment for many years and lacks the capabilities of modern financial management applications.

  Despite of the lack of vendor support, the OFM Statewide Financial Systems staff continues to make significant enhancements to AFRS in response to the state's emerging needs. Unfortunately, 20th century tools do not meet 21st century needs.

- **Disbursement Reporting System (DRS)** – A parallel system partly linked to AFRS data, focuses on payables (disbursements) reporting and generation of annual 1099 statements. It also addresses Office of Minority and Women Owned Business (OMWBE) requirements.
- **Time Management System (TMS)** – Stores and tracks labor costs, feeds into AFRS and allocates labor costs to various programs and projects. The TMS application provides labor hour data to AFRS which is combined with AFRS and budget data to create profit-and-loss (P&L) reports.
- **AFRS Data Download System (ADDS)** – Specifically developed to provide a tool for agencies to download extracts of AFRS transaction data for further analysis and is tied to agency unique business data for reporting.

Intel/Windows Server-Based

- **Performance Measurement Tracking System (PMTS)** – A reporting system that links agency performance targets to budget information and tracks progress toward them. PMTS links performance measures to information in the budget systems. It also provides trend reporting for performance measures that allows users to view performance information from various budget perspectives (agency, activity, strategy, and results areas).
- **Enterprise Reporting (ER)** – A common reporting framework for Washington State's financial, administrative, and performance information. Enterprise Reporting provides a set of enterprise-wide tools that enable self-service reporting, ad-hoc query, analysis, and presentation of statewide financial information for all state agencies and legislative staff.
- **Financial Toolbox (FTbx)** – Part of a larger set of web-based applications known as Accounting Web. FTbx consists of a collection of Microsoft Office tools and templates that facilitate the extraction and manipulation of agency financial data from the user's desktop for input into AFRS for processing.

3. BUSINESS CASE

The purpose of this section is to ensure a common understanding of the business needs this feasibility study is addressing, the objectives against which success will be evaluated, and the requirements that define "what" the solution needs to do.

3.1 PROBLEM STATEMENT

The scope and breadth of Washington's government services have evolved and expanded over several decades in response to citizen demands expressed as new State laws, policies, and processes. The state's core financial system (AFRS) was implemented in 1982 when the state had about 4.7 million citizens, fewer than 80,000 state government employees and an operating budget of about $17 billion. By 2006, the state's population had increased to over 6.4 million, with more than 106,000 state government employees (includes higher education) and an operating budget of more than $27 billion.

Against this challenge of continuing growth and change, the existing statewide and agency-owned financial and administrative systems are doing a reasonably good job of performing the functions they were designed to do for their organizations. Over the years since they were implemented, many statewide and agency-owned systems have been updated and enhanced to support emerging needs and expand existing functionality. The pace of change continues unabated. These same systems are being asked again and again to respond to new demands that cross organizational boundaries, including cost accounting, performance measurement, and independent assessments of program and service effectiveness. The State of Washington is at the crossroads between 20th century tools and 21st century needs – it must position for the future.

In response to new demands, the state of Washington is faced with three significant problems:

1. **It is difficult and labor intensive to capture, prepare, respond, track, and monitor performance information.**
   - Existing financial data and information does not support or align with needed performance information; in particular, non-financial data cannot be easily captured or tracked using existing systems. The few systems that have the needed financial information require a significant amount of staff time to compare or exchange the information. In many cases, the performance information simply does not exist. Complicating the situation, many existing system interfaces in state government are difficult to maintain and require significant resources to support.

2. **A few agencies have the capacity and resources to position themselves to meet their specific needs and support some of the State's major initiatives; most agencies do not have this capacity.**
   - Agencies with adequate dedicated revenue sources have historically planned and implemented their own core systems tailored to meet agency-specific business needs. Other agencies without such resources have been left to make do with other, less-efficient methods and systems, often manual and labor intensive. Given these circumstances, this disparity in capacity and resources is not going to change, however implementation of improved statewide systems

would help level the playing field for all agencies. If not addressed, the disparity between the have and have-nots will continue to widen, and lost agency investment opportunities will occur.

3. **It is anticipated that the state will continue to experience a significant loss of the institutional knowledge required to support and enhance existing business systems.**
   - According to the Washington State Department of Personnel, 64% of Washington State employees will be eligible to retire in the next 10 years. Agencies will be challenged to replace these highly skilled and experienced employees. At the same time, successful implementation of major system changes and enhancements requires people who understand the state's laws, business needs, policies, processes, and systems. Failure to have this understanding will only increase the cost and risk for any project. The state is already totally dependent on current employees to maintain AFRS, which is on a platform no longer supported by a vendor.

Other environmental challenges contribute to and exacerbate these key problems. Information demands resulting from policy changes at the federal level and new state initiatives like performance auditing and GMAP are increasingly complex and come with performance and financial detail expectations. Requirements at the federal and state level are not diminishing, they are increasing over time.

With the continuing spread of the "Internet Age" and growing public sentiment for "government accountability", these trends are not likely to subside anytime soon. In addition, our younger workforce comes with expectations for modern tools and business practices which must be addressed if we expect to recruit and retain our future workforce.

3.2 OBJECTIVES

This section describes Enterprise and Business Objectives:

- **Enterprise Objectives** – will be used to define what the project is to accomplish and how success will be measured. Enterprise Objectives will also be used as criteria to evaluate each alternative (as defined in Section 4) to be considered.
- **Business Objectives** – were identified and prioritized during Milestone 3 Business Modeling activities and are a result of analysis of current challenges, needs, opportunities, and best practice research. Business objectives (See Volume II, Appendix B) are in significantly greater detail than Enterprise Objectives.

3.2.1 ENTERPRISE OBJECTIVES

In order to meet the challenges of today's business environment, new solutions resulting from this feasibility study must satisfy the following:

- Provide the data necessary to support the update and maintenance of statewide cost accounting policies and processes,
- Provide the data necessary to support the update and maintenance of a statewide performance measurement system,

- Provide comparable financial management data based on common definitions and structures,
- Provide robust statewide systems that are available to all agencies,
- Establish laws, policies, and processes that create an environment which supports enterprise direction,
- Position the state's financial and administrative policies, processes, and systems to take advantage of industry best practices and current technology,
- Increase the functionality and usefulness of statewide enterprise financial and administrative systems, providing broader support to agency business needs,
- Increase statewide process and system flexibility to enable responsiveness to constantly evolving demands and mandates,
- Improve efficiency by eliminating collection, entry, and maintenance of redundant data,
- Improve the state's ability to attract and retain staff knowledgeable in financial and administrative policy, processes, and systems,
- Reduce the level of effort currently required to develop and support complex interfaces,
- Reduce the number of resources currently needed to produce cost accounting and performance measurement information.

3.3 REQUIREMENTS

Requirements are high level statements that define what must be done to solve the problem. Requirements are foundational to describing not only the scope of the study (functions to be performed), but also what needs to be performed within each function. While based on the current state, requirements represent the desired state.

With participation from agency experts in numerous working sessions, the *Roadmap* project team examined the business processes and related business objectives, challenges, and opportunities to define a set of high-level business and technical requirements.

- **Business Requirements** – provide an understanding of the different functions that the preferred alternative must be able to perform. Business requirements are categorized by: general ledger, cost accounting, performance measurement, vendor identification management, and order processing accounts payable.
- **Technical Requirements** – provide an understanding of various system requirements that must be adhered to, but do not relate to business requirements. Technical requirements have been categorized by: performance, usability configurability, supportability, data integrity, access control authentication, integration, and quality implementation.

The *Roadmap* work group participants focused not only on the need for improved decision-making support through law, policy, and process improvements, but also the flexibility needed in system design to support business and performance management. The resulting business and technical requirements (See Volume II, Appendix C) are therefore the result of much discussion, active collaboration, and compromise.

4. ALTERNATIVES ANALYSIS

This section presents a description and analysis of the three alternatives considered during the preparation of this feasibility study.

For each of the alternatives considered, a description of the alternative is provided along with a summary of the evaluation results. Each alternative was evaluated based on two types of assessment:

- Evaluative ranking assessment
- Advantages and disadvantages assessment

The results of the evaluative ranking assessments were used by the project team only to identify which of the three alternatives were considered viable. Once viable alternatives were identified, the alternatives were further reviewed to understand how other factors influenced the final selection. Specifically, each viable alternative was further evaluated to determine: impact on other efforts underway, lessons learned from other states, industry best practices and the HRMS implementation.

Based on the experience of the HRMS project, specific cost benefits were not determined at this time. Only project costs were identified and included in this study. Given that the earliest time the implementation could start would be 2011, the Executive Sponsors and the Project Team believe that benefits measured at this point would not only be inaccurate but would be misleading if used as an alternatives selection criteria.

4.1 EVALUATIVE RANKING ASSESSMENT

The evaluative ranking assessment was performed against a framework consisting of the following three categories: 1) Needs/Value, 2) Risk, and 3) Cost.

The points assigned for each area (Table 4) were based on weighting factors provided by the *Roadmap* Project Sponsors during the Milestone 4 effort. These maximum points were used to scale each of the three sets of rating scores described below.

Table 4: Overall Sponsor Points

Criteria	Definition	Maximum Points
Needs/Value	Satisfaction of enterprise and agency business objectives and requirements for policy, organization, process, system, and data. Solution of current and anticipated enterprise and agency business problems. Resulting in net positive outcomes to the enterprise and agencies.	50 (0 Worst 50 Best)
Risk	The level of risk associated with the implementation and operation of the alternative to the enterprise and agencies. Risk level measures the complexity of the changes required against the business value for the enterprise and agencies.	10 (0 Worst 10 Best)

Criteria	Definition	Maximum Points
Cost	Direct and indirect cost of enterprise and agency implementation and ongoing operations based on the entire business process. Implementation costs include the costs of changes to agency and enterprise policies, organizations, processes, systems, and data. Ongoing operation costs include remaining current with statutory, grant, financial and administrative standards for governments, and recognized best practices for policies, organizations, processes, systems, and data.	40 (0 Worst 40 Best)
	TOTAL :	100

Individual Needs/Value, Risk, and Cost rating scores for each alternative were scaled against the total points in the following manner.

Needs/Value Assessment

The scoring process involved the following steps:

- **First,** each grouping of requirements under a Business Objective was assigned a priority factor by the *Roadmap* Agency Advisory Group (AAG), using a voting process. Priority factors assigned to each grouping were High, Medium, or Low (High=5, Medium=3, Low=1).
- **Second**, each grouping of requirements was assigned a relative ranking from 0 through 10 for each alternative.
- **Third**, the relative rankings were multiplied by the requirements priority factor (High=5x, Medium=3x, Low=1x) to compute the score for each group of requirements under each alternative.
- **Fourth**, the scores for each alternative were summed up to arrive at a total number of ranking points.
- **Fifth**, the total ranking points for each alternative were used to determine a ratio applied to the Sponsor's maximum value of 50, to arrive at a point value for each alternative ranging between 0 and 50.

The following example shows how scores were computed for a hypothetical set of alternatives.

Assume:

Alternative 1

Total rankings points (based on requirements) - 600

Maximum achievable rankings points – 2,400

Maximum points awarded – 50

Then:

Points score for Alternative 1:

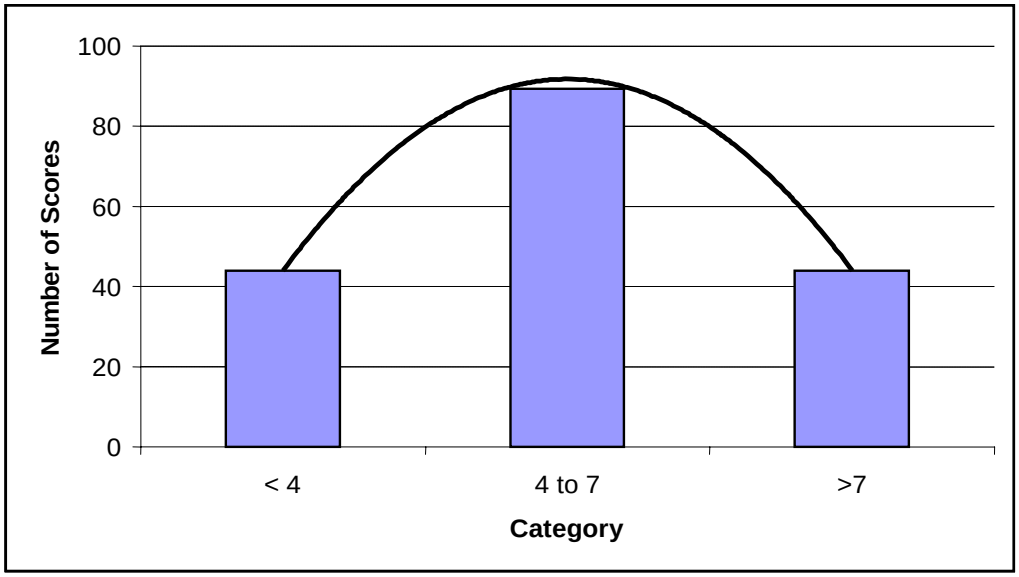
(600 / 2,400) * 50 = 12.5

(Total rankings points / maximum achievable rankings points) * maximum points awarded = Alternative 1 score

This rating and scoring process incorporated a certain amount of subjectivity, since the score for each alternative against each set of requirements is largely based on the project team's assessment as to how well the requirements are met (or not met) by the alternative.

However, it should be noted that the project team was very careful to score each alternative as fairly as possible by limiting the use of very low and very high ratings numbers. During the scoring process, about as many "low" number ratings (0 to 3) were assigned as "high" number ratings (8 to 10), with the largest share of ratings in the middle, from 4 to 7. This "bell curve" distribution of ratings is illustrated in the chart (Figure 2) below:

Figure 2: Distribution of Ratings by Category



Out of 168 total requirements rated, there were 44 "low" and 44 "high" ratings, with another 88 in the mid-range.

Finally, the team was careful to apply the same basic rating rules to all three alternatives so that final scores remained internally consistent. These rating scores are most meaningful as a tool to compare the *relative* "fit" of each alternative to each set of requirements, and should not be examined in isolation.

Risk Assessment

Risk ratings were determined for each alternative using a framework of project and operational risk factors obtained from the Department of Information Services, Information Services Board, and other common sources such as the Project Management Institute. Risk factors that were considered include:

- **Implementation Risk**
  - Project related – Overall likelihood of implementation project failing to meet scope, schedule, or budget constraints

- Resource related – Likelihood of implementation running into enterprise and/or agency resource constraints, especially in terms of subject matter expertise
- Change related – Degree to which the implementation requires major change management across state agencies including impact on higher education institutions

o **Operational Risk**

- Obsolescence – Likelihood that implemented solution will fail to keep up with needs over time
- Integration – Degree to which solution requires modifications to agency-based or other enterprise systems to achieve and maintain integrated capabilities

The process for rating each alternative and assigning risk points was:

o **First**, each alternative was evaluated by the project team against the risk factors noted; a risk rating for each factor was determined for each alternative.

o **Next**, the risk ratings were multiplied by the relative weight of each risk factor, then summed up for each alternative into a total *implementation* risk score and a total *operationa*l risk score. The sum of these two components is the total risk ranking score.

o The total risk ranking score for each alternative was used to scale the points available for this category, 10. A 'zero risk' alternative would have achieved a 10; an alternative with the most risk points possible would have achieved a 0 score.

The following example shows how risk scores were computed for a hypothetical set of alternatives:

Assume:

Alternative 1

Risk rankings points - 175

Maximum achievable risk rankings points – 800 (maximum risk)

Maximum points awarded – 10

Then:

Points score for Alternative 1:

((800 - 175) / 800) * 10 = 7.8

(maximum achievable risk rankings points - risk rankings points) / maximum achievable risk rankings points) * maximum points awarded = Alternative 1 score

Cost Assessment

Cost points were awarded based on assessment of two cost factors: 1) project implementation costs, and 2) total 10-year costs of operation (project cost plus

operational costs). Both values were computed for each alternative, but only the 10-year total costs of operation was used to assign scoring points. The number of points awarded for cost (maximum 40) was calculated as shown in the following example.

Assume:

Alternative 1

10-year cost - $1.600B

Lowest achievable cost – $1.600B (baseline)

Maximum points awarded – 40

Then:

(1.600 / 1.600) * 40 = 40

Points score for Alternative 1:

(Lowest achievable cost / Alternative 1 cost) * maximum points awarded = Alternative 1 score

Summary

Upon completion of all the scoring steps, the "best possible" alternative could achieve a perfect score of 100 points only by; a) fully meeting all objectives and requirements (50 points), b) exhibiting no project or operational risks (10 points), and c) by having the lowest overall cost (40 points).

4.2 ADVANTAGES/DISADVANTAGES ASSESSMENT

In addition to the Evaluative Assessment, each alternative was subjected to a secondary framework of assessment criteria dealing with advantages and disadvantages. Relative advantages and disadvantages for each alternative versus the criteria were collected into a set of pros and cons that could be subjectively compared against each other.

The assessment framework is shown below:

- **Alignment with Enterprise Objectives –** How the alternative meets or fails to meet enterprise objectives (see Section 3.2.1);
- **Perceived agency flexibility and independence –** How the alternative impacts perceived agency flexibility and independence resulting from implementation of the alternative;
- **Agency resource capacity –** How the alternative conflicts with or consumes available agency-based resources;
- **Agency equality –** How the alternative affects ongoing agency variations in capability and budget/fiscal resources (haves versus have-nots);
- **Duplicative effort –** How the alternative reduces or encourages agency systems to exist in parallel to each other and to statewide capabilities, driving the propensity for similar agency problems to be solved independently;
- **Enterprise best practices –** How the alternative promotes adoption of financial and performance measurement best practices;

- **Technology relevance and stability –** How the alternative contributes to improving the relevance (non-obsolescence) and stability of core IT platforms;
- **Level of change –** How the alternative impacts the degree or level of organizational/cultural change expected.

4.3 OVERVIEW OF ALTERNATIVES

Based on work completed during the early part of Milestone 4, the *Roadmap* Sponsors identified three alternatives as described below.

- ***Status Quo*** – This alternative represents the course the state is currently on. Individual agencies would continue to make necessary policies, processes, and system changes in accordance with, and in response to, state mandates and directives. At the statewide level, state and agency policies, processes, and purchases of and investments in systems would continue to evolve individually in response to emerging needs.
- ***Leverage AFRS*** – This alternative would continue to deliberately build new functionality around the state's existing financial management system, AFRS. Statewide policies, organizational structures, processes, and systems would be reviewed and enhanced to support enterprise and agency visibility and management. Additional functionality would be added or built to existing AFRS and Enterprise Reporting systems, including the acquisition of commercial packages to further support enhanced policies, organizational structures, and processes (i.e. cost accounting and performance measurement).
- ***Leverage HRMS –*** This alternative would purchase the licenses necessary to implement the financial and administrative modules of the current SAP software, thus extending the state's existing investment and deployment of ERP technology. Statewide policies, organizational structures, processes, systems and data would need review for conformance with SAP processes and business rules.

Each alternative is described below.

4.3.1 STATUS QUO ALTERNATIVE

This alternative represents the course the state is currently on. Individual agencies would continue to make necessary policies, processes, and system changes in accordance with, and in response to, state mandates and directives. At the statewide level, state and agency policies, processes, and purchases of and investments in systems would continue to evolve individually in response to emerging needs.

Realization of this alternative would require or result in the following:

- The identification of legal, policy, process, and system changes necessary to support the state's stated direction for increased accountability and performance management.
- The replacement of old, agency-specific financial systems with newer, modern systems over time.
- Establishment of a statewide governance structure that would assist in the further clarification of emerging needs.

- Continued support of multiple data sources and complex integration between statewide and agency systems.

Figure 3: Status Quo Assessment Results

STATUS QUO – EVALUATIVE ASSESSMENT			
Needs/Value	Risk		Costs
	Implementation Risk	Operational Risk	
15 points out of possible 50 points, based on a weighted score of 634 .	Low – due to minimum implementation costs; continuation of "business as usual"	High – due to diminishing viability of existing enterprise systems that are approaching end-of-life; the continuing difficulty and inability to define common financial and administrative data definitions; the lower chance of implementing enterprise vision and implementing best practices.	40 points out of a possible 40 points, based on minimum project implementation costs, no change to baseline over 10 years
Evaluative Score: 62 points, out of a possible score of 100.			

Figure 4: Status Quo Advantages and Disadvantages

STATUS QUO – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	Disadvantages
• Departments retain a perceived level of flexibility and independence o Flexibility is dependent on fiscal constraints (have vs. have-not agencies)	• Difficult, if not impossible, to achieve Enterprise Objectives due to: o Agencies limitations in responding to enterprise needs or new mandates due to the disparity among agencies based on fiscal constraints (haves vs. have-nots) o Limited number of resources available to make necessary changes on a timely basis o Existing interfaces are functionally limited and expensive to maintain
• Does not further complicate agency capacity management challenges with enterprise project demands	• Problems impacting multiple agencies would be solved independently and redundantly through investments in new and enhanced agency-unique systems
• Least amount of change for agencies	• Difficult to move all agencies toward industry

STATUS QUO – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	**Disadvantages**
	best practices for financial and administrative processes and systems (including technology platforms)

4.3.2 LEVERAGE AFRS ALTERNATIVE

This alternative would continue to deliberately build new functionality around the state's existing financial management system, AFRS. Statewide policies, organizational structures, processes, and systems would be reviewed and enhanced to support enterprise and agency visibility and management. Additional functionality would be added or built to existing AFRS and Enterprise Reporting systems, including the acquisition of commercial packages to further support enhanced policies, organizational structures, and processes (i.e. cost accounting and performance measurement).

For this alternative, the *Roadmap* team worked with OFM's Statewide Financial Systems and Statewide Accounting staff to envision how the functionality of AFRS and other core financial systems could be enhanced to support business objectives and requirements. The detailed assessment is located in Volume II, Appendix D. As a result of this effort, the following changes were assumed to be included in this alternative:

- Enhance the governance structure to support the development of common policies, processes, definitions, measures, and movement toward financial and administrative best practices.
- Upgrade AFRS and Enterprise Reporting
  - Upgrade AFRS functionality by:
    - Expanding the chart of accounts to accommodate agency specific fields.
    - Enabling real-time posting of financial transactions to general ledger.
    - Improving vendor identification management by integrating with and sharing available vendor information (e.g., via the planned Business Portal).
    - Implementing and integrating a best-of-breed accounts payable system.
    - Adding enhancements to enable tracking of financial events related to performance measurement.
    - Implementing and integrating cost accounting functionality.
  - Convert AFRS to a modern database structure that will provide increased flexibility to support a chart of accounts structure and real time transaction processing.
  - Increase decision support and performance measurement capabilities.

- Purchase additional functionality (that cannot be accomplished through system enhancements) that integrates commercial off-the-shelf systems, such as an end-to-end purchase-order-to-pay module.
- Activate the SAP general ledger module for the HRMS deployment and strengthen the integration framework between AFRS and HRMS.
- Delay or defer replacement and addition of new agency systems through the implementation of broader, more functional statewide capability.

Leverage AFRS Assessment Results:

Figure 5: Leverage AFRS Assessment Results

LEVERAGE AFRS – EVALUATIVE ASSESSMENT			
Needs/Value	Risk		Costs
	Implementation Risk	Operational Risk	
29 points out of possible 50 points, based on a weighted score of 1,215 out of a possible maximum weighted score of 2,060	Moderate – due to risk resulting from coordination issues and resource constraints	Moderate – due to risk of aging AFRS platform and expected loss of support personnel to retirement	38 points out of a possible 40 points, based on an estimated $96 million project cost to implement, increases 10-year baseline cost by $104 million (project cost plus additional maintenance following project)
Evaluative Score: 71 points, out of a possible score of 100 points			

Figure 6: Leverage AFRS Advantages and Disadvantages

LEVERAGE AFRS – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	Disadvantages
• Able to meet some Enterprise Objectives: o Implement common data definitions for AFRS o Increase functionality and provide additional capacity through modifications to AFRS	• Unable to meet some Enterprise Objectives: o May reduce, but would not eliminate duplicate collection and entry or maintenance of redundant data o Would not reduce the development and support of complex interfaces o Problems impacting multiple agencies would be solved independently and redundantly through some investment in new or enhanced agency based systems ▪ Agencies unable to fully respond to enterprise needs or new mandates,

LEVERAGE AFRS – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	**Disadvantages**
	placing more strain on enterprise resources to compensate o Difficult to augment with additional knowledgeable staff due to dependencies on existing resources and rate of retirement in the state
• Reduced degree of change retains main AFRS look-and-feel and leverages agency staff experience (except for new modules)	• Modifications to AFRS would require the State maintain integration across different vendor solutions
• Cultural and organizational change could be introduced more gradually, thus leveraging the existing familiarity with AFRS	• Does not address the disparity between agencies (haves vs. have-nots) • Does not provide rich enough functionality or configurability to entice ”have” agencies to adopt, rather than spend funds, to build their own solutions
• Existing platforms and system would be substantially upgraded and improved via project funding and investment (one-time development costs)	• Limited (one-time) ability to adopt industry financial and administrative best practices; limited ability to stay current by adapting to changes driven by industry over time • Functionally more complex; multiple user interfaces to learn; harder to achieve common definitions across separate solutions

4.3.3 LEVERAGE HRMS ALTERNATIVE

This alternative would purchase the licenses necessary to implement the financial and administrative modules of the current SAP software, thus extending the state’s existing investment and deployment of ERP technology. Statewide laws, policies, organizational structures, processes, systems and data would need review for conformance with SAP processes and business rules.

For this alternative, the *Roadmap* team contacted SAP’s technical staff in order to envision how the functionality of SAP’s financial functionality could support the *Roadmap* Core Financials Project’s business objectives and requirements. The detailed assessment is located in Volume II, Appendix E.

Realization of this alternative would require or result in:

- Purchase of new or exchange of existing SAP licenses.
- Stabilization and upgrade of the existing HRMS platform and implementation.

- Enhancing the governance structure to support the development of common policies, processes, definitions, and measures as defined by best practices.
- Definition and development of a chart of accounts with common data definitions.
- The leveraged HRMS ERP solution intends to replace four OFM systems (applications):
  - The Agency Financial Reporting System (AFRS)
  - The Disbursement Reporting System (DRS)
  - Enterprise Reporting (FASTRACK), based on the extent to which SAP Business Warehouse functionality meets state requirements
  - The AFRS Data Distribution System (ADDS)

Figure 7: Leverage HRMS Assessment Results

LEVERAGE HRMS – EVALUATIVE ASSESSMENT			
Needs/Value	Risk		Costs
	Implementation Risk	Operational Risk	
36 points out of possible 50 points, based on a weighted score of 1,481 out of a possible maximum weighted score of 2,060	High – due to degree of change required, recent experience with large scale implementations	Low – due to reliance on industry best practices in implementation and operations, stable long-term platform (compared to AFRS), revisions to financial operations business practices and approach, increased agency consistency	36 points out of a possible 40 points, based on required up-front investment of $146 million. Increases 10-year baseline cost by $151 million due to project cost and ongoing software maintenance.
Evaluative Score: 77 points, out of a possible score of 100			

Figure 8: Leverage HRMS Advantages and Disadvantages

LEVERAGE HRMS – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	Disadvantages
• Able to meet all Enterprise Objectives: o Includes ERP full cost accounting and performance measurement functionality, based on standardized and common data definitions o Places core financial and non-financial data in the same system o Easier to augment staff, resources are available from several potential	• Solutions ability to meet all Enterprise Objectives has some negative impacts: o ERP staff augmentation is expensive; increases dependencies on vendor/partner for upgrades and support o Greatest level of change and resistance, difficult to adopt industry based ERP-solutions ▪ Substantial law, policy and process changes needed to fully align with

LEVERAGE HRMS – ADVANTAGES AND DISADVANTAGES ASSESSMENT	
Advantages	**Disadvantages**
support partners/integrators o Would reduce the number and complexity of interfaces o Reduces duplicative resources (dollars and staff) needed to conduct system enhancements	ERP best practices o Changes and enhancements based on a product development life-cycle that may or may not match the state's needs at times
• Offers more functionality/capacity to many agencies that do not have their own systems (haves vs. have-nots)	• Agencies would perceive an enterprise solution as less flexible to their agency specific needs
• Eliminates the need for double-entry, (manual entry into two different systems), except in cases where agency systems are retained and interfaces not implemented	• Agency resources would be required to support the development and implementation of an enterprise solution, while providing on-going support for current systems
• Supports the adoption of ERP-based best practices and vendor improvements over time	• Greatest level of resistance due to recent experience with HRMS implementation
• Replaces a number of legacy systems with state-of-the-art systems	

5. SOLUTION

The Alternative Analysis (Section 4) provided a mechanism to review and select viable alternatives; however, before a proposed solution can be selected, there are several other questions to be considered:

- What can we learn from Washington's HRMS project?
- What can we learn from other states, industry best practices, and research?
- What can Washington do to better prepare for a financial and administrative solution implementation project?

This section addresses these questions, proposes an alternative, describes the rationale for the proposed alternative, and then further describes an implementation approach.

5.1 LESSONS LEARNED FROM HRMS

The HRMS project presented a status update to the ISB on September 14, 2006. During that meeting they discussed a series of "Lessons Learned and Challenges" as summarized below.

- ***Must have strong and unwavering state leadership and executive support***

  The Co-Director's (DOP and DIS) ownership and active engagement in the project was supported by the Governor. This allowed both directors to hold the other agency directors accountable for implementation success at their respective agencies.

- ***Funding should include change management and follow-on maintenance***

  In addition to the work of human resource and payroll staff, agency leadership and good communication were critical components of a successful transition to HRMS. Timely, accurate information about HRMS and its impact in agencies was critical to support employees through transition. Additional staff are needed at the user agencies to ensure day-to-day operations are not harmed and staff can be dedicated to the project.

- ***Users need to be intimately involved in training and business process reviews***

  User involvement and understanding of the project is critical for ultimate success. By involving users in the business process review and by providing adequate training, users are provided the opportunity to better understand the impact of legal, policy and process changes in their organizations.

- ***Users need to be involved in identifying the business requirements and "owning" agency needs to understand what the business requirements are and the problems to be solved through clear business objectives.***

  Project success can only be realized if the enterprise direction is understood. Law, policy, process, and systems must align to the enterprise and business objectives of the project.

- ***Scope creep and expansion needs to be tightly controlled***

Processes need to be in-place that allow project staff to assess the impact that change requests will have on the project. Key decisions were sometimes made without sufficient input.

- ***Need to plan for knowledge transfer to state staff***

  As with any new system, it takes time to gain the proficiency and confidence to troubleshoot tough issues. During the time users are getting comfortable in the new system environment, system tasks and transactions may take longer to complete as a result of unfamiliar or additional steps.

- ***Consider phased implementation for significant enterprise projects***

  Phased implementation allowed the team to effectively leverage the scarce expert state resources and enabled them to focus on the most critical tasks. The phased rollout also enabled the project to support the application at go-live while the state resources transitioned into their future roles.

- ***Retention of key resources***

  Over the project lifecycle, many employees from other agencies participated in the project to assist in the testing efforts. DOP was able to successfully recruit a number of these resources to join DOP permanently. These transfers now comprise the backbone of the production support efforts.

5.2 Lessons Learned From Other States, Industry Best Practices, and Research

Based on research from both Deloitte Touche[4], and Gartner[5] the following key best practices should be considered:

- ***Align the organization on the true destination***

  Everyone in the organization needs to have the same vision about the original motivations for implementing ERP-enabled processes; which includes both the targeted capabilities and the targeted benefits.

- ***Use the business case as a management tool***

  The business case is anything but a static, one-time exercise intended to secure funding. The business case is a dynamic management tool used to validate the design, set targets, manage to those targets, and prioritize change initiatives.

- ***Transition project roles to a way of life***

  Going live can involve hundreds of people in dozens of roles; however, the program needs to operationalize the way roles change and the way such change is orchestrated. Preparing for the critical shift in roles allows people to transition from being team members to stewards – stewards who are invested in project and organizational success.

[4] Deloitte Consulting, "ERP's Second Wave – Maximizing the Value or ERP-Enabled Processes or Making ERP Spell ROI"
[5] Gartner citation 1

- ***Build and leverage process expertise***

  Process focus is critical for success. Organizations need to identify a set of core process experts. Often organizations move project process experts back into the business units to ensure an environment of continuous process improvement.

- ***Promote post-implementation commonality***

  Commonality – Common system, common language, common practices, and common information seen at the same time – and providing largely the same conclusions by all who see it.

- ***Teach the organization to use the new capabilities***

  Many organizations are far better at building new capabilities than at teaching (and motivating) people to use them. Successful organizations avoid this fundamental imbalance.

- ***Define metrics and manage to them***

  Successful organizations set targets, establish budgets, and make it happen. Metrics are the glue that keeps organizations focused on real benefits.

- ***There are three distinct stages after going live:***

  - **Stabilize** – Secure and sustain the core ERP functionality.
  - **Synthesize** – Build for the future by adding other capabilities (often non-ERP.)
  - **Synergize** – Achieve value in use by thoroughly mastering those new capabilities).

- ***Decide between "best practices" and "user defined" implementations***

  Gartner's research states – "Many companies commit to implementations using best-practices application scenarios, or configurations delivered by vendors or systems integrators (SI's), without fully understanding the implications. They don't realize they're committing to changing their business processes to fit preconfigured business applications. Once the project begins, they realize they're being forced to change their business processes to fit the software's best practices."

  - **Best practices implementation** – Users gain speed by accepting a basic configuration and pre-defined business processes.
  - **User defined implementation** – Users analyze and choose their configuration parameters to use any or all of the software functionally without customization.

Figure 9 below demonstrates the pros and cons of following best practices:

Figure 9: Pros and Cons of Following Best Practices

Advantages	Disadvantages
The business can start to realize benefits quickly	Some business processes will have to be changed to fit the pre-defined processes. No time will be allocated to customize or develop interfaces to the business applications.
Users will have to spend less time on the project away from their primary jobs.	Users will not be able to do business their way. Users and technical resources will not understand the full capabilities of the business application
There will be fewer business disruptions during the implementation project.	Users must be able to change the way they do business at a fast pace. The IT organization will not have all the skills to support the production environment when the business application is ready to go live.
Decisions can be made quickly	A small group of senior people to participate and to make decisions quickly.
Implementations cost less	A higher upfront cost is required during a phased implementation

Best practices recommended for the public sector in Government Finance Officers Association can be found in Volume II, Appendix F.

5.3 POSITIONING ACTIVITIES

During the course of this feasibility study, the *Roadmap* Team not only reviewed the merits of each alternative, but they also reviewed other efforts underway that might impact the success of the selected alternative. Upon completion of that review, the following foundational activities were identified as efforts that will help position the state for future change and should be completed prior to moving forward with a financial and administrative solution.

These foundational activities will help position the state for future change and include:

1. Activities that prepare the way for the future project;
2. Activities that evaluate the impact on agencies.
3. Activities to keep current systems effective; and
4. Structures that can prevent the erosion of the enterprise benefits.

The positioning activities described below (Table 5) are beyond the scope of this study and are listed in the implementation approach in Section 8.

Table 5: Positioning Activities

DOP is responsible for the stabilization of the HRMS and AFRS interfaces.	The HRMS project was the first major initiative conducted under *Roadmap.* All ERP implementations, including Washington's HRMS, should include a post-production period where resources focus on improving the base installation. The process should begin by collecting user input as to what is working and what is not and to re-examine implementation decisions, upgrade technology, provide more training and improve business process integration to better meet user expectations and leverage the available tools. Additionally, the HRMS to AFRS financial interface was implemented as a solution that would not corrupt the SAP financial fields. This interface is critical to efficiently processing payroll including reporting of employee time and expenses. Depending on the implementation alternative ultimately selected and the implementation timeline, it may be worth re-examining and re-designing the interface.
OFM will take the lead in further defining the financial and administrative enterprise and state direction	*Roadmap* strategies focus on policies, processes, systems, and data that meet both enterprise and agency financial and administrative needs. In order to implement these strategies, it is critical that there be an understanding by all agencies of what an "enterprise" solution means and how it impacts their organization. The purpose of this effort is to further define "enterprise" and provide agency direction and guidance that supports the implementation of the changes needed. By providing direction and guidance agencies will be in a better position to determine the impact to their organizations.
OFM, DIS, DOP and GA, will review the existing Roadmap governance structure to be more program oriented.	As stated above, a common understanding and broad communication is needed that further defines the state's future direction. In support of that direction, the current governance structure should be reviewed to ensure it has the ability and authority to provide the leadership needed to implement the agreed upon direction. Much of the business case for investing in enterprise financial and administrative solutions is based on the fact that it is either not possible or often labor intensive to extract and analyze data. The ability to develop consistent data that can be compared and analyzed requires the implementation of policies, processes, systems, and data that all agencies adhere to. This includes the further development and standardization of agency specific approaches and solutions to financial and administrative systems. If agencies are allowed to move forward with agency unique financial and administrative solutions in common business process areas, the business case and need for enterprise solutions will erode. An effective governance structure, with the authority to set direction and make durable decisions is critical.

OFM in collaboration with key stakeholders will lead the effort to complete a chart of accounts review and common data definition analysis to determine degree of consistent data requirements.	In order to implement enterprise reporting, it is critical that there be common definitions for financial and administrative data. Re-examination of the chart of accounts would be the starting point for these activities. Chart of Account enhancements and modifications would provide the depth and breadth of financial and administrative data needed to support the enterprise functional requirements. This would include the analysis of data definitions needed to support performance measurement and cost accounting. While changes to the chart of accounts are foundational, they also represent significant changes to agency and higher education financial data.
OFM, DIS, and GA will lead the effort to review state procurement rules, policies and procedures to identify areas for potential streamlining.	The current laws and policies must be streamlined and standardized before more efficient processes and tools to support them can be designed and implemented. The scope of this feasibility study includes the order processing and payment activities that follow defining acquisition needs, soliciting, and selecting a vendor from whom to make the acquisition and vendor negotiation. The activities involved in the acquisition of goods and services were not included in the scope of this feasibility study because current procurement laws, policies, and processes are often complex and commodity or organization specific.
DIS will continue providing leadership and necessary oversight to complete the implementation of major agency line-of-business systems.	In addition to stabilizing the HRMS solution, there are several large ongoing system efforts that will demand enterprise and agency resources. Efforts such as Provider One, OMNI, BAIAS, and other Level 3 projects are pulling valuable resources away thus limiting staffing availability. It will be important that DIS support the coordination and scheduling of key state initiatives in order to ensure valuable subject matter expertise is available. In the proposed 2007-2009 budget, DIS has requested funding from the Legislature for a project and portfolio management office to ensure the success of state information technology projects.
DIS and OFM, will provide the direction and guidance necessary to move agencies toward established standards and approaches through review of existing laws, policies and processes.	Having common standards and approaches in place when the *Roadmap* implementation begins will make the project easier. If agencies adopt common approaches, they could better leverage enterprise supplied common functionality and design line-of-business systems that focus on core missions and distinct needs. A current example of leveraging common functionality in an agency system is found in the Provider One project that will be using the AFRS current central disbursement functionality rather than building a duplicative stand-alone capability.

OFM will lead a cross agency effort to further examine and document existing interface/integration processes or issues.	A more detailed understanding of all the interfaces into and out of the central financial and administrative systems would be an important asset, both as a scoping instrument for the integrator procurement process and the implementation analysis process. Documentation of these data flows and process integration points will be important regardless of the implementation timeline.
OFM will take the lead for implementing a strong Change Management Program that will assess agency capacity and readiness.	The implementation of the financial and administrative changes that the *Roadmap* calls for will result in a significant organizational challenge. A Change Management Program will help build support and agreement among the staff and leadership about the goals of the program and the strategies to meet those goals. It will provide an opportunity to gain an understanding of agency impact. In order to build support for the project, capacity, and an environment for staff to thrive, it would be beneficial to build agency capacity and skills in financial management. This could be done through regular events that help staff envision the state's future direction and also collect feedback and advice on how to best implement change. These events should be part of a robust change management program that paves the way for significant change and ensures that incremental decisions continue to move the project in the desired direction.
DIS, GA, OFM, and DOP will work to incorporate lessons learned from other states and the HRMS implementation.	Successful implementation and deployment will only occur if we learn from the mistakes and successes of others. Washington not only has its own experiences from HRMS, but by not being first, it can learn from research and from the experiences of implementing similar functionality in other states.

5.4 RECOMMENDED ALTERNATIVE

The alternative that best meets the enterprise objectives and requirements identified by the *Roadmap* Team is: Leverage HRMS. This recommendation is based on the results of the Alternatives Analysis presented in Section 4 and the additional considerations noted above.

As previously described, the Leverage HRMS alternative would purchase the licenses necessary to implement the financial and administrative modules of the current SAP software, thus extending the state's existing investment and deployment of ERP technology. Statewide laws, policies, organizational structures, processes, systems and data would need review for conformance with SAP processes and business rules.

Realization of this alternative would require or result in:

- Purchase of new or exchange of existing SAP licenses.
- Stabilization of the existing HRMS platform and implementation.
- Enhancing the governance structure to support the development of common policies, processes, definitions, and measures as defined by best practices.

- Definition and development of a chart of accounts with common data definitions.
- The Leverage HRMS Alternative intends to replace four OFM systems:
  - The Agency Financial Reporting System (AFRS)
  - The Disbursement Reporting System (DRS)
  - Enterprise Reporting (FASTRACK), based on the extent to which SAP Business Warehouse functionality meets state requirements
  - The AFRS Data Distribution System (ADDS)

5.5 RATIONALE

Upon completion of the evaluative and advantages and disadvantage assessments, it was determined that Status Quo was not a viable option for the following reasons.

- Core systems do not fully support the vision for an enterprise system. This alternative perpetuates "as-is" (with minimal change over time) and fails to realize the benefits of consistent processes, measures, and data definitions in the foreseeable future.
- The legacy systems that the state currently uses are difficult to modify to support new and changing business requirements, such as performance measurement. Without significant investments and upgrades, they will provide diminishing value over time.
- Agencies will continue to struggle when answering questions using tools designed to meet the needs of a different era. This effort diverts time and resources away from service delivery.
- If high-quality enterprise information systems are not provided, the number of agency-unique systems and desktop applications can be expected to grow. As agencies devote more resources to building and maintaining agency-unique systems, their incentive to support enterprise solutions will diminish. Continued development and maintenance efforts divert resources away from agencies' core missions and perpetuate the void in enterprise information.
- The historic imbalance between self-funded and general fund "have" and "have-not" agencies that leads to widely divergent system investment capabilities will continue and grow more pronounced.

Both Leverage AFRS and Leverage HRMS were considered viable options; however, Leverage HRMS was found to best meet the Enterprise Objectives in regards to positioning the state for the future and in meeting the resource challenges it is facing. The following table (Table 6) provides a summary of each alternative's ability to support the Enterprise Objectives.

Rating Scale:

Does not meet
Meets with limitations
Fully meets

Table 6: Enterprise Objectives Alternative Analysis

Leverage AFRS	Leverage HRMS	Enterprise Objectives	Justification
		Provide the data necessary to support the update and maintenance of statewide cost accounting policies and processes	Both alternatives can enforce common data definitions and a chart of accounts. However, Leverage AFRS requires upgrades to the current system and the purchase of additional software that relies on multiple variations of business rules and cost accounting methods across diverse systems. Leverage HRMS is based on a single, integrated ERP system with a unified set of business rules, and provides the best opportunity to implement a common set of data definitions.
		Provide the data necessary to support the update and maintenance of a statewide performance measurement system	Leverage HRMS has performance measurement functionality built into the solution, allowing for the capturing and tracking of performance data that can be reported and displayed through a robust "dash-board" tool. Leverage AFRS has the capacity to capture and track performance data but will require additional system development efforts and interfaces with other core systems in order to report and display relevant information.
		Provide comparable financial management data based on common definitions and structures	Both alternatives can enforce common data definitions and data structures. However, Leverage AFRS requires upgrades to the current system and the purchase of additional software based on multiple variations of definitions and structures across diverse systems.
		Provide robust statewide systems that are available to all agencies	A robust solution will provide the capacity to analyze, compare and report financial and administrative information across the enterprise. Leverage HRMS deploys a statewide ERP/SAP. The Leverage AFRS solution would require the purchasing of a suite of tools/solutions that would need to be integrated. The complexity of the Leverage AFRS environment, which is built on multiple solutions, would limit system flexibility across the state.

Leverage AFRS	Leverage HRMS	Enterprise Objectives	Justification
		Establish laws and policies that create an environment which supports statewide direction	The ability to establish policies is the same for each alternative; however, each alternative varies in its ability to implement established policies. A single integrated solution based on consistent business rules, Leverage HRMS, has a greater chance of supporting statewide policies.
		Position the state's financial and administrative policies, processes, and systems to take advantage of industry best practices and current technology	Leverage HRMS expands the implementation of an industry-leading ERP solution, SAP. As an industry leader, SAP is responsible for conducting on-going research that drives system upgrades that implement best practices based on user group feedback. The Leverage AFRS solution would require continuing state research and development efforts in order to stay current in financial and accounting best practices. In addition, the state would have to establish a product support structure that is not currently in place.
		Increase the functionality and usefulness of statewide enterprise financial and administrative systems, providing broader support to agency business needs	A robust solution should provide the capacity to analyze, compare and report financial and administrative information across the enterprise. Leverage HRMS deploys a statewide ERP solution. Leverage AFRS would require the purchase of a suite of tools and applications that would need to be integrated. The complexity of the resulting environment, which is built on multiple solutions, would limit system flexibility.
		Increase statewide process and system flexibility to enable responsiveness to constantly evolving demands and mandates	While responding to state specific needs will always be a challenge, Leverage HRMS comes with tools that support system flexibility and allow reconfiguration and redeployment of the system. For example, business rules can be changed and through the use of system tools the modifications can be implemented statewide. Leverage AFRS does not include similar tools and is limited in its ability to restructure the core systems via reconfiguration.

Leverage AFRS	Leverage HRMS	Enterprise Objectives	Justification
		Improve efficiency by eliminating collection, entry, and maintenance of redundant data	Both alternatives improve efficiency in the collection and entry of data; however, Leverage HRMS will have greater impact on efficiency during data maintenance and reduction of redundant data entry through the deployment of an integrated core system.
		Improve the state's ability to attract and retain staff knowledgeable in financial and administrative policy, processes, and systems	Both require WA specific financial and accounting knowledge; however, under Leverage HRMS, the implementation of an industry-standard ERP will expand the state's resource pool to include 3rd party vendor resources.
		Reduce the level of effort currently required to develop and support complex interfaces	AFRS currently consists of a patchwork of customized systems supported by over 30 data interfaces. While no solution will eliminate all complex interfaces, the Leverage HRMS solution has the potential to significantly reduce data and application interface set-up and maintenance through the use of integration capabilities built around a single application, SAP.
		Reduce the number of resources currently needed to produce cost accounting and performance measurement information	Leverage HRMS has performance measurement functionality built into the solution, allowing for the capturing and tracking of performance data that can be reported and displayed through a robust "dash-board" tool. Leverage AFRS also has the capacity to capture and track performance data but requires additional system development and interface efforts in order to report and display pertinent information.

In summary, the Leverage HRMS Alternative best meets the enterprise objectives and requirements because it positions the state to meet future demands. In particular:

- Leveraging HRMS has the best chance of delivering significant improvements in performance measurement by leveraging private sector and public sector best practices and the tools and techniques available in the package.
- Leveraging HRMS has the best chance of delivering significant improvements in legal and policy reform because it embeds many best practices, provides a modern technical and business framework, and enables electronic commerce.
- Leveraging HRMS has the best chance of consolidating and centralizing policy and operations because it has been designed to facilitate that through the use of sophisticated workflow, self-service, and shared service components.
- Leveraging HRMS has the best chance of significantly streamlining business processes. It will address broader functionality than our specifications required, thus improving the chance of eliminating silos of data and functionality. The application's business model will encourage standard approaches and reduce process complexity.
- Leveraging HRMS would be most likely to significantly increase the degree to which Washington can leverage enterprise technology because it provides a modern technological framework and integration platform from which to build a more integrated technology environment.
- Leverage HRMS will allow the state of Washington to take advantage of industry best practices as system upgrades are deployed. While system upgrades can be expensive and complex to implement, they also provide the best opportunity to take advantage of financial best practices and industry trends.

Whereas, the Leverage AFRS alternative would be responsive to the functionality needed to support most of the enterprise objectives; it does not best position the state for the future. In particular:

- Core systems could be made to support the vision for an enterprise system by developing a statewide chart of accounts, upgrading existing core systems, and purchasing missing functionality. Specifically, key enterprise objectives related to the access and analysis of data would be possible.
- Leveraging AFRS, including the purchasing of additional functionality would not simplify an already complicated technical environment. Multiple software tools would make it difficult for statewide integration of systems and data vs. implementing a single ERP application.
- Leveraging AFRS would, in the short-term, continue reliance on key staff with the institutional knowledge necessary to support these systems. However, this could prove problematic since 64% of the state government workforce will be eligible to retire in 10 years.

5.6 IMPACTS

Enterprise Resource Planning (ERP) system implementation impacts can be significant and are often far-reaching, stretching beyond the immediate realm of the

implementation itself. The *Roadmap* team has recognized the significant impact on agencies by identifying the activities necessary to best position agencies and the state to be successful. Positioning Activities are described in Section 5.3. This section identifies some potential impacts that may be realized as implementation is completed and stabilization proceeds.

Customers

Recipients of products and services offered by State agencies will be impacted directly by the implementation of the recommended solution, primarily via improved customer service. An ERP platform provides a consolidated view of all customer transactions in a way that facilitates quicker and higher quality answers to customer inquiries.

Users

The implementation of an enterprise financial and administrative system will require significant changes to agency and higher education supporting business policies, processes, organizational structures and automated systems. Research has proven that failure to challenge and modify existing processes will result in a solution that is complex, difficult to maintain, and reduces the likelihood of realizing anticipated benefits.

Business Partners

Commercial entities doing business with the State will be impacted by improved customer service capabilities and be able to exchange information with the State in new, more efficient ways (such as improved system-to-system messages and file exchange). Large corporate enterprises will benefit most in the short run, since many of these partners already use ERP software with built-in integration features to run their businesses. Over time, the spread of ERP technology to small and mid-sized business will broaden the impact of the State's new accounting and financial systems and practices.

Other Governmental Agencies

Other governmental agencies (cities, counties, regional associations, etc.) that routinely exchange information with the State will be impacted as the source of that information changes to the ERP platform and becomes more consistent and standardized. Supporting business processes and automation needs will impact other governmental agencies and their supporting systems in order to ensure the use of common data definitions and the reduction of complex interfaces.

Key Stakeholders

Key stakeholders in all three branches of State government (legislative, executive and judicial) will be impacted in various ways by implementation of the recommended ERP-based solution. Consolidation and standardization of data, supported by legal, policy, process and rules changes, should allow stakeholders to ask and answer more questions about government operations than ever before. Aggregation of cost information should shed more light on the total costs of selected programs and initiatives. Capture of online transactions (events) will provide a view of the State's business activity that has never been available before.

5.7 RECOMMENDED IMPLEMENTATION APPROACH

Building on lessons learned from similar projects in Washington and other states, the realization of *Roadmap* efforts can be achieved by following a planned approach with three overlapping steps:

Table 7: Stepwise Approach

Step 1 **Get Ready** Establish the Policy Foundation	Step 2 **Implement** Transform Business Processes and Systems	Step 3 **Realize Results** Analyze Results and Make Adjustments

• *Adopt governance model*
• *Establish Enterprise Program Office*
• *Clarify state and agency information needs*
• *Define and adopt enterprise:*
  - *21st century chart of accounts*
  - *Best practices*
  - *Full costing methodology*
  - *Business rules*
  - *Data and transaction standards*
• *Identify changes to laws, policies and budgets*
• *Conduct Positioning Activities*
• *Define roles, responsibilities and security model*
	• *Benchmark business processes and unit costs*
	• *Implement:*
	  - *A single general ledger with real-time links to line of business systems*
	  - *Activity based costing*
	  - *Reporting / analysis tools*
	  - *Enterprise best practice business processes*
		• *Stakeholders access authorized budget, cost, revenue, and performance information through interactive reporting tools*
		• *Take action: improve service delivery*
		• *Measure progress against objectives*

STEP 1 – Establish the Policy Foundation

At inception, the *Roadmap* approach creates the legal, policy, and process framework by establishing a system to create agency, including higher education, participation in designing the future business and technology standards that will lead toward achieving the objectives previously described. This will support statewide information exchange and the use of consistent business practices to do the same work. This step focuses on the following components of the vision:

- *Relevant, consistent information*

- *Collecting data one time, at the source*
- *Full costing for programs and activities*
- *Risk- based review and audit*

Initially, the approach clarifies the information needs of citizens, legislators, and executive and line managers, creating standards for reporting program and project plans, activities, and results across agencies. It also defines operational standards for transaction processing, for example creating common definitions, business rules, and transaction formats. These standards support the integration of data from various sources and systems, facilitating cross agency comparisons and the use of the same data to address different needs.

Currently, the *Roadmap* project has a Steering Committee responsible for providing direction and making timely decisions. In Step 1, the existing project governance structure would be further defined as an on-going program governance structure that has the responsibility and authority to provide direction and make decisions. To assist in this transition and to communicate the governance board's responsibilities, a detailed project charter would be created.

In addition, it will be critical to establish an Enterprise Program Office (EPO). The EPO would be responsible for the overall management and administration of *Roadmap* business and technical initiatives. EPO responsibilities include program readiness, program project management, policy development, change management, establishment of standard practices for measuring project performance, resource management, contract and budget administration and quality assurance.

The *Roadmap* approach further establishes a methodology for assigning all costs to the programs and projects the state must deliver to its citizens. This full costing methodology is a cornerstone of statewide performance measurement. It will allow citizens, legislators, and executives as well as agency managers to understand the total cost of programs, services, and projects as compared to the results or net value that they deliver.

The first step also creates the framework for risk-based review and audit of purchases and payments for goods and services used in delivering programs and services. This will provide reasonable assurance of the fiscal integrity of purchases and/or payments and support automated authorization of each and every purchase and payment. This change allows program managers to manage risk by ensuring a different level of due diligence/review for a $10.00 vs. a $10,000 expenditure, thus increasing the value of the review.

Lastly, this step will identify and propose changes to legislation and policy that would facilitate the implementation of the new standards and processes across state government.

STEP 2 - Transform Business Processes and Systems

Step 2 involves the activities necessary to implement the recommended alternative. It begins with the development of detailed requirements to be used in hiring the systems integrator partner. These business and technical requirements would be developed in a collaborative process that involves agency experts in each business and technical area. Since the requirements teams would know ahead of time what technical solution was

being implemented they could focus on defining the expected business process improvements and future vision components. By deciding on the software alternative before choosing the integrator it allows each integrator some creative license to apply their best experience to solving the business problems and meeting the business objectives within the equal constraint of a consistent software platform within the Washington State environment.

After approving the requirements and other procurement documents the process of hiring the integrator partner would begin by advertising the solicitation. Since the large selection of top tier integrators will not have to team with the small number of software vendors, we would expect to receive responses from as many as half a dozen qualified contractors. It would be beneficial to have a procurement process that qualifies vendors in a progressive manner through extensive interviews of staff and demonstrations or conference room pilots of limited business functions.

The integrator's proposal would articulate their recommended approach to all in-scope business areas. After the integrator started work there would be a period of extended discovery by the vendor's staff to verify assumptions made during the procurement and validate that proposed approaches continue to be the best under current circumstances. The detailed design work would begin and would expect to add detail to the conceptual designs and approaches documented during Step 1. The solution would be built with minimum core software modifications using best practice approaches and lessons learned from other public sector implementations.

Testing and training would occur as close to real life as possible and would consider the entire business process not just the interaction with the new software solution. Testing and documentation would extensively evaluate integration components and re-designed business processes.

Rollout of the solution to the enterprise would likely occur on a phased approach basis with select groups of agencies. The agency groups could be determined by mixing small and large agencies together to balance the workload of the core team over the life of the project. Or, the most complex agencies could be implemented early (maybe not first) so that the permanent team might be able to support the small incremental changes these agencies might require after building out the solution to support the most complicated agencies. Lessons learned in the HRMS project might prove useful here as well.

STEP 3 – Realize Results

In order to realize the benefits of these significant improvements in financial and administrative policies, processes, systems, and data there should be a period of post-production adjustments to fine tune these efforts. Not surprisingly, most organizations encounter a period of frustration and lower efficiency immediately after ERP systems go live.

Organizations that lose focus and think of going live as the end of the process may never fully achieve the benefits envisioned. Going live is not "The End" but rather "The End of the Beginning." By continuing to focus on the original vision, top performing organizations move through this period quickly and soon begin to realize significant benefits.

There are three distinct stages in each ERP implementation after going live[6]:

- **Stabilize** (secure and sustain the core ERP functionality);
- **Synthesize** (build for the future by adding still other capabilities to the mix);
- **Synergize** (achieve value in use by thoroughly mastering new capabilities).

To achieve the best post go-live benefits Washington State should:

- Measure performance through peer reviews, benchmarking, ROI confirmation, and monitoring of pre-implementation performance measures.
- Based on these measures, the state should make process and software adjustments, provide additional training in software and processes, and review lessons learned to identify adjustment areas.
- Other areas that should also be examined would include further leveraging the platform by bolting on solutions for high-value business functions and monitoring for unintended benefits.

5.8 TECHNICAL IMPLEMENTATION APPROACH

To further understand the recommended alternative, the following describes the technical implementation implications.

Platforms

The operational needs for statewide financial accounting systems are virtually identical to those of the existing HRMS deployment. The technical hardware platform targeted for deployment of the recommended solution features a series of Intel-based processors running the Microsoft Windows Server operating system. In this way, the proposed hardware platform expands upon the existing SAP R/3 Windows-based deployment in place today for the HRMS system.

Software Configuration

The feasibility study in-scope business processes were identified as general ledger and financial reporting, cost accounting (including the cost of labor aspects of Human Resource Management), decision support, performance measurement, and purchase order to pay (Payee Identification Management, Order Management, and Payables Accounting). In order to provide the in-scope functionality, all or part of the following SAP modules would need to be implemented:

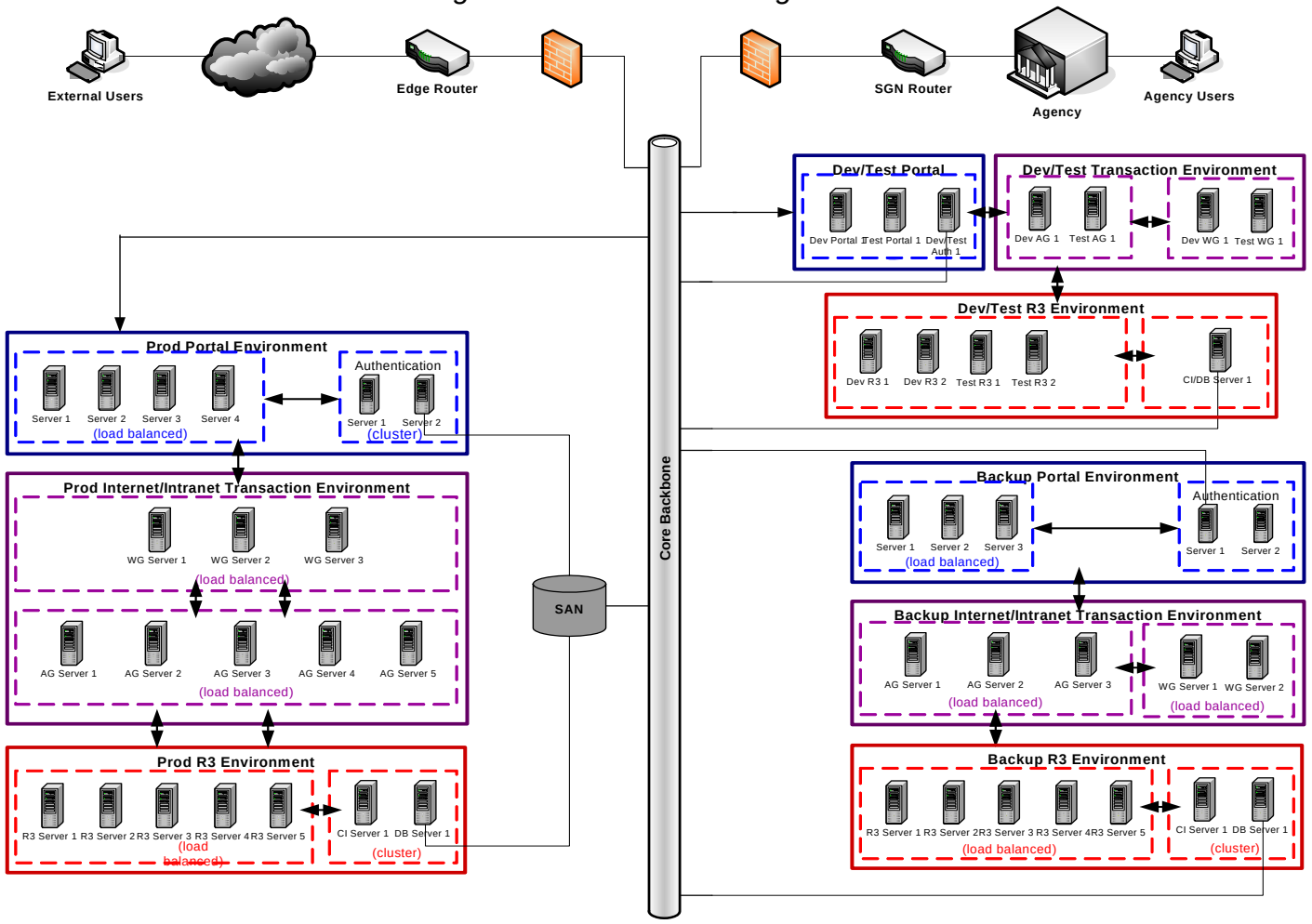
- General Ledger;
- Accounts Payable;
- Purchasing (Vendor Management and Order Management); and
- Business Intelligence.

Hardware Configuration

[6] Deloitte Consulting, Ibid.

Figure 10 beginning on the next page, provides an example of a generic, high-level technical configuration diagram for three environments: Production, Backup, and Development/Test. This diagram replicates the existing deployment of the HRMS system.

Figure 10: Technical Configuration



6. CONFORMITY WITH THE STATE'S STRATEGIC DIRECTION

New demands driven by the Government, Management Accountability, and Performance (GMAP) program and performance audits, increase the need for responsive management tools and processes that focus even more on results. Citizens expect state legislators, executives, managers, and employees to:

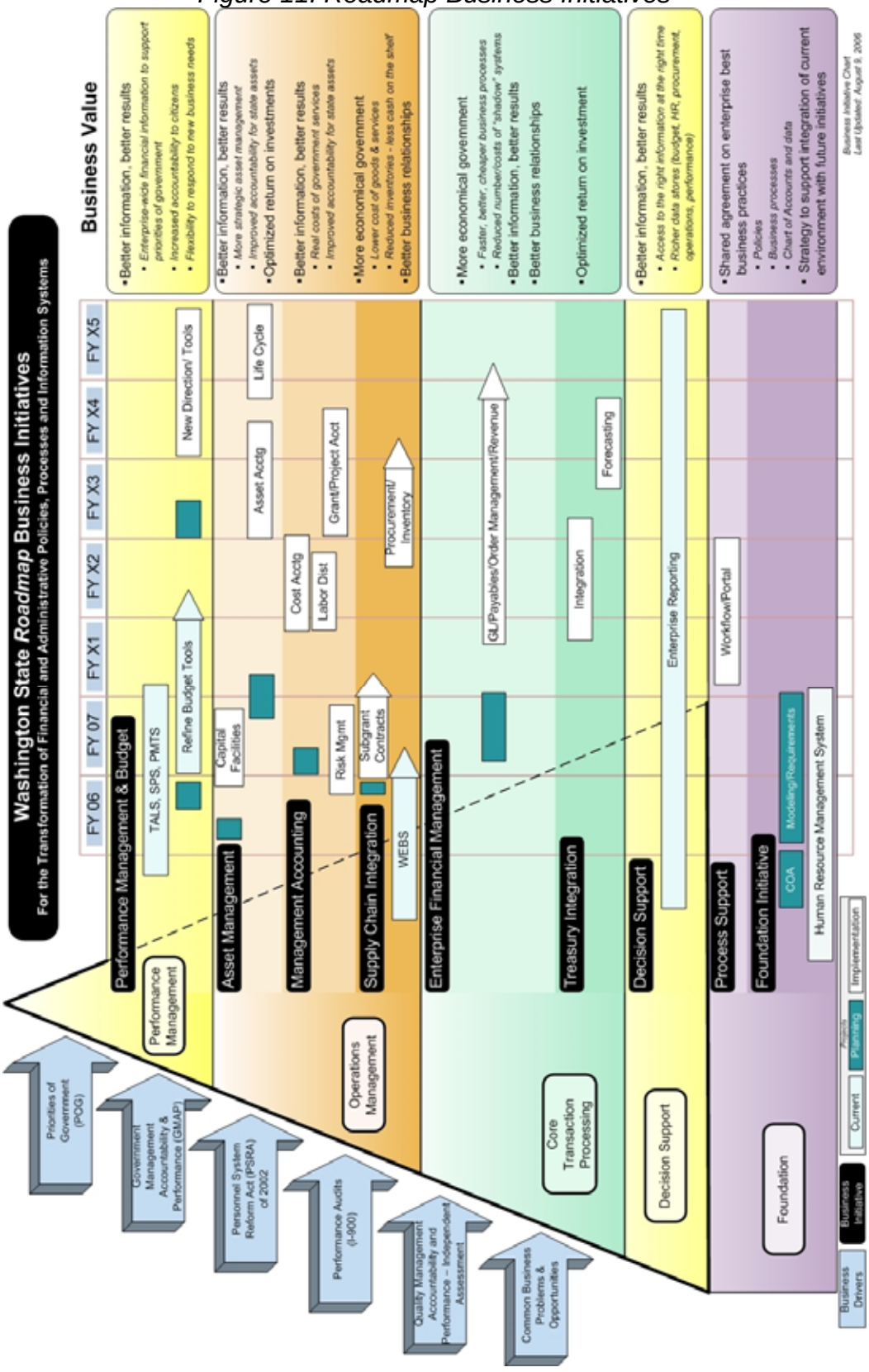
- Get the facts and drive decisions based on accurate, up-to-date information and robust analysis;
- Deploy strategies that are "proven best practices" that lead to allocation of resources to the highest priorities, improved results and greater accountability;
- Break down bureaucratic silos and actively collaborate and integrate efforts to reduce costs by standardizing processes and policies, eliminating data inconsistencies, standardizing reports where appropriate, and better managing technology systems;
- Be strategic and responsive to current and emerging socio-economic needs by continuously improving management and performance so citizens receive maximum value for their tax dollars;
- Continuously improve customer service and use "plain talk" in all communications; and
- Be accountable by promoting fiscal integrity and openness.

The *Roadmap* is the state's strategic program aimed at aligning policies, processes, and practices to help meet citizens' expectations. The *Roadmap* is a collaborative effort of state agencies to create a comprehensive plan for delivering the tools the state needs to support and sustain Governor Christine Gregoire's goal of improving the management and accountability of state government programs.

The solutions framework for the *Roadmap* is laid out in the *Roadmap* Business Initiatives Chart below. This chart shows the proposed sequence of business initiatives that can transform Washington State's financial and administrative policies, processes, systems, and data over time.

Completion of the Feasibility Study is one more step toward building the foundation needed to support the *Roadmap* program. This study illustrates that major policy, process, data, and system change is both feasible and necessary to support the state's efforts to provide greater accountability and meet citizens' expectations. Business initiatives that are included in *Roadmap* are shown in Figure 11.

Figure 11: Roadmap Business Initiatives



7. PROJECT MANAGEMENT AND ORGANIZATION

This section describes approaches and structures for project management and organization, including a discussion on governance, staffing levels, project roles, and responsibilities. It discusses aspects of the transformation that will be in-scope and activities considered out of scope. This section closes with the description of assumptions made in the development of this feasibility study.

7.1 PROGRAM GOVERNANCE AND ORGANIZATION

Governance is defined as having the authority to make decisions and being accountable for their results. On the other hand, project management is the discipline of organizing and managing resources in such a way that these resources deliver all the work required to complete a project within defined scope, time, and cost constraints[7].

Governance and project management requirements for successful completion of the *Roadmap* include:

- Executive involvement and commitment
- Governance structure
- Team organization and staffing levels
- Project and team roles and responsibilities
- Stakeholder involvement
- Project management toolkit including change management plan

7.1.1 GOVERNANCE STRUCTURE

The *Roadmap* program's final authority and accountability for making decisions currently resides with the four Executive Sponsors. The placement of the ultimate authority in a group of high-level executives ensures that decisions are made, resources are available, and issues are resolved as the project implementation timetable demands.

However, as the program moves forward it may be necessary to transition the existing Executive Sponsor structure an expanded governance body capable of supporting both the program and the projects. Consideration should be given to expanding the *Roadmap* Steering Committee to include line-agency directors as members. This Committee must be in a position to make timely and reliable decisions that are responsive to the needs of the program the projects and agencies, durable over time and visible to all impacted parties.

The authority of the *Roadmap* Steering Committee and their relationship to other financial and administrative initiatives will need further clarification. Some operating principles the *Roadmap* Steering Committee may wish to address are:

- Setting and providing clarity for a state/enterprise strategic direction.

[7] Wikipedia, Information technology governance and Project management

- Reviewing and approving related enterprise policy/process changes and reviewing impact of changes made by the Legislature, and OFM statewide policies related to GAAP compliance.
- Ensuring the on-going communication and coordination of statewide enterprise initiatives.

The *Roadmap* Steering Committee will be responsible for providing a clear direction for the realization of the vision for the state's enterprise financial and administrative policies, processes, data, and systems. The Committee will review enterprise financial and administrative initiatives for all agencies. They will also be responsible for resolving issues, approving all scope and budget changes related to specific projects that have been initiated in support of the *Roadmap* program or have implications for enterprise financial or administrative policies, processes, data and systems.

It is strongly recommended that the state establish an Enterprise Program Office (EPO), responsible for the overall management and administration of *Roadmap* business and technical initiatives. EPO responsibilities include program readiness, project management (including planning, design and implementation through the entire project life cycle), policy development, change management, establishment of standard practices for measuring project performance, resource management, contract and budget administration, and quality assurance.

Stakeholder involvement would continue through the *Roadmap* Advisory Group, comprised of central service and line-agency designees and chaired by the *Roadmap* Program Director. This group would represent their constituent, provide feedback to the project and review and comment on process improvement recommendations.

For the purpose of the *Roadmap* Core Financials Project identified in this feasibility study, the project team should be comprised of staff from central services and line agencies reassigned to the project for two or more years. Throughout the policy development and solution design phases, it is critical that participating agency staff represent a broad spectrum of Washington State government so that the planning and design reflect the needs of the enterprise. During subsequent phases, the composition of the team may shift depending on the functionality being implemented and the agencies being rolled out.

See Volume II, Appendix G for the proposed composition of the *Roadmap* Core Financials Project team over time[8]:

Project roles fall into five categories:

1. **Project Manager** – Responsible for the daily leadership of the project or a specific component of the project, and project success. Will manage the project resources and the delivery of quality products and implement direction given by the *Roadmap* Steering Committee and EPO Program Director. Communicate with all agencies about *Roadmap* and its implications.

[8] We have included staffing for pre-start activities such as detailed business requirements development, quality assurance and integrator procurement, and recruiting and training staff for phase 1 project activities.

2. **Performance Analyst** – Responsible for determining whether the processes are utilizing resources in an economical and efficient manner. Understands causes of inefficiencies or uneconomical practices, including inadequacies in management information systems, internal and administrative procedures, organizational structure, use of resources, allocation of personnel, purchasing policies, and equipment.
3. **Administrative Support** – Provides needed clerical and administrative support.
4. **Business Analyst** – Responsible for understanding business needs and how the project could and will address those needs. Will participate in the analysis of user requirements, product selection analysis, policies, procedures, and problems. Will also participate in other project activities such as design, testing, documentation, and training.
5. **Systems Analyst** – Understands current and proposed technical environment and application profiles, establishes technical environment, implements change control, and participates in project activities such as design, development, testing, and implementation.
6. **ERP Specialist** – Responsible for overall system architecture, design and implementation phasing decisions that will meet the needs of the state, take into considerations lessons learned, industry best practices and manage risk.

These roles are used in various subject matter areas over the life of the project. Permanent *Roadmap* Core Financials Project staff, central service agency staff, line agency staff, vendor staff, and roll-out agency staff fill the roles for targeted functions over specific timeframes.

A separate quality assurance group will report directly to the Steering Committee and EPO Program Director. The quality assurance approach for the *Roadmap* Core Financials Project includes four separate components aligned with the implementation project organization structure:

1. ***Project management oversight*** – This effort examines the effectiveness and outcomes associated with project scope, controls, budget, and risk management activities.
2. ***Policy development oversight*** – Oversight in this area focuses on progress in the revision, standardization, and development of statewide polices (and potentially changes to statutes and rules required for implementation of best practices for financial and administrative performance measurement, general ledger, cost accounting, and order to pay functions).
3. ***Integration oversight*** – Quality assurance for business and technical integration efforts examines the approach and results associated with implementing the SAP ERP, changes to central services and line agency systems to integrate with the enterprise suite of financial and administrative tools, data conversion, and implementation planning for agencies in general and in a particular roll-out group.
4. ***Change management oversight*** – The emphasis in this area is on communication, expectations management, agency readiness (business transition planning and execution), training development and deployment, and organizational change management.

The *Roadmap* Core Financials Project anticipates staffing the four separate quality assurance efforts with external professionals (from one or more companies) qualified from both subject matter and oversight experience perspective. Quality assurance for this large, complicated, and lengthy project requires an external perspective to provide an independent view of expected results, status, and issues.

7.1.2 STAKEHOLDER INVOLVEMENT

External stakeholders are only a small part a governance structure; however, they will be asked to strongly contribute to the project through their involvement in such things as:

- ***Roadmap* Advisory Group –** Representatives from key agencies throughout state government.
- **Working Committees of the *Roadmap* Advisory Group –** At a minimum, these would include committees for policy development, requirements confirmation, implementation management, and organizational change.
- **Project Focus Groups –** These groups would be convened on an ad hoc basis to address specific project initiatives. For example, they could design enhancements to enterprise information standards, establish the statewide cost accounting approach, determine information requirements for internal and external stakeholders, create a consistent order and receiving process, and design post-payment audit criteria.
- **Agency Subject Matter Experts –** These experts would be called upon to review and comment on project deliverables.

These activities will vary over the project life cycle.

7.1.3 PROJECT MANAGEMENT TOOLKIT

As with any project or transformational endeavor of this size, the *Roadmap* management team will use a variety of pre-established standards, policies, and processes (toolkit) in addition to a group of highly qualified and committed staff to provide a structure for project success. These standards, policies, and processes for successful projects are often described in the following classifications:

Project Planning and Control – Standards, policies, and processes in this area describe chartering for various project phases, the scope for each phase, performance measurements for each phase, roles and responsibilities of team members, governance body members, quality assurance professionals, and internal and external stakeholders, and the project issue reporting and resolution process.

Project Resource Management – Tools in this area help manage budget dollars and staffing by providing high level and detailed work plans, tools to capture and report time, and reports to compare budget to actual spending patterns. Project daily, weekly, and monthly reporting compares resource utilization to both outputs and outcomes based on phase performance measurements.

Communications Management – Standards, policies, and processes in this area describe targeted audiences, messages, planned timing and frequency, and methods for communication with internal project resources and internal and external project stakeholders. These tools are focused on keeping the messages

accurate, consistent, frequent, and targeted towards the perspective of each audience. Where possible, industry best practice is to communicate in person at events such as team meetings, customer round tables, and brown bag lunch status updates.

Issue Management – Issue management tools focus on identifying and resolving decisions to be made about project tasks in a "just in time" fashion. Once an unresolved question is identified, issue management tracks, assigns, and escalates decisions until a resolution is reached and communication of decisions made.

Change Control – Change control tools identify how the project team addresses variations to plan. These standards, policies, and processes identify how and when accepted changes are incorporated into project work.

Risk management is also part of this management toolkit and is described separately in Section 10 of this report.

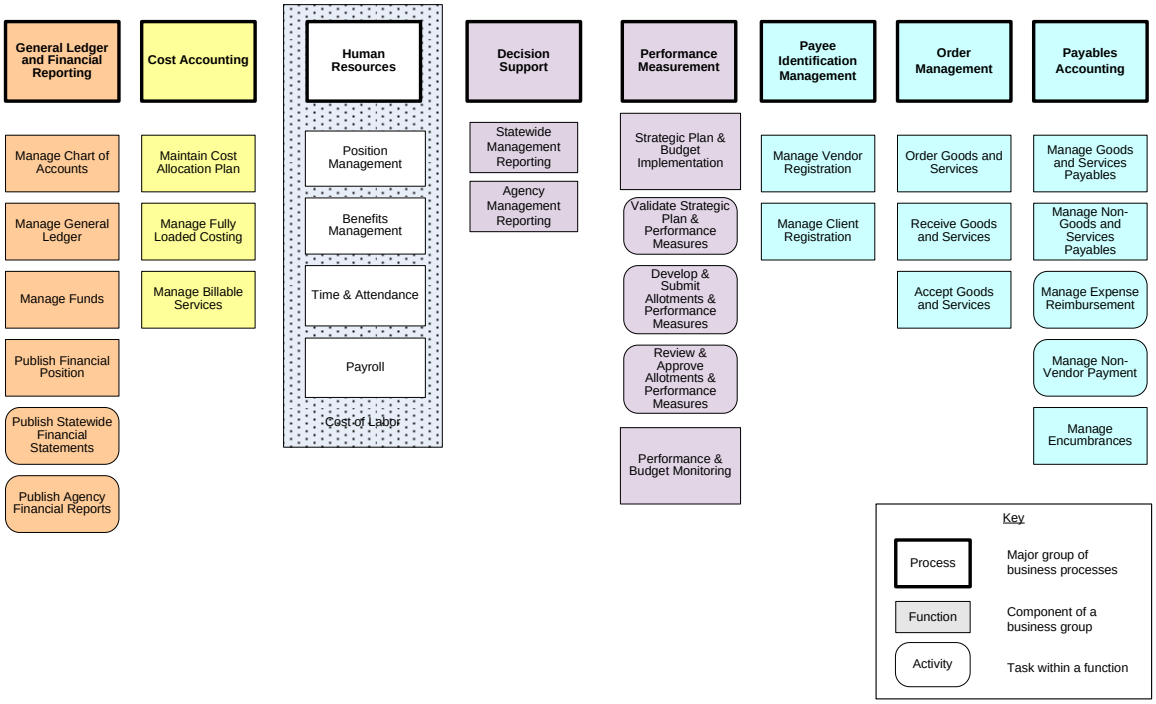
7.2 PROJECT SCOPE

This section discusses what aspects of the project are considered in and out of scope for this project.

7.2.1 IN-SCOPE

- **Functionality –** The proposed solution includes the following functional components:

Figure 12: Scope of Proposed Solution



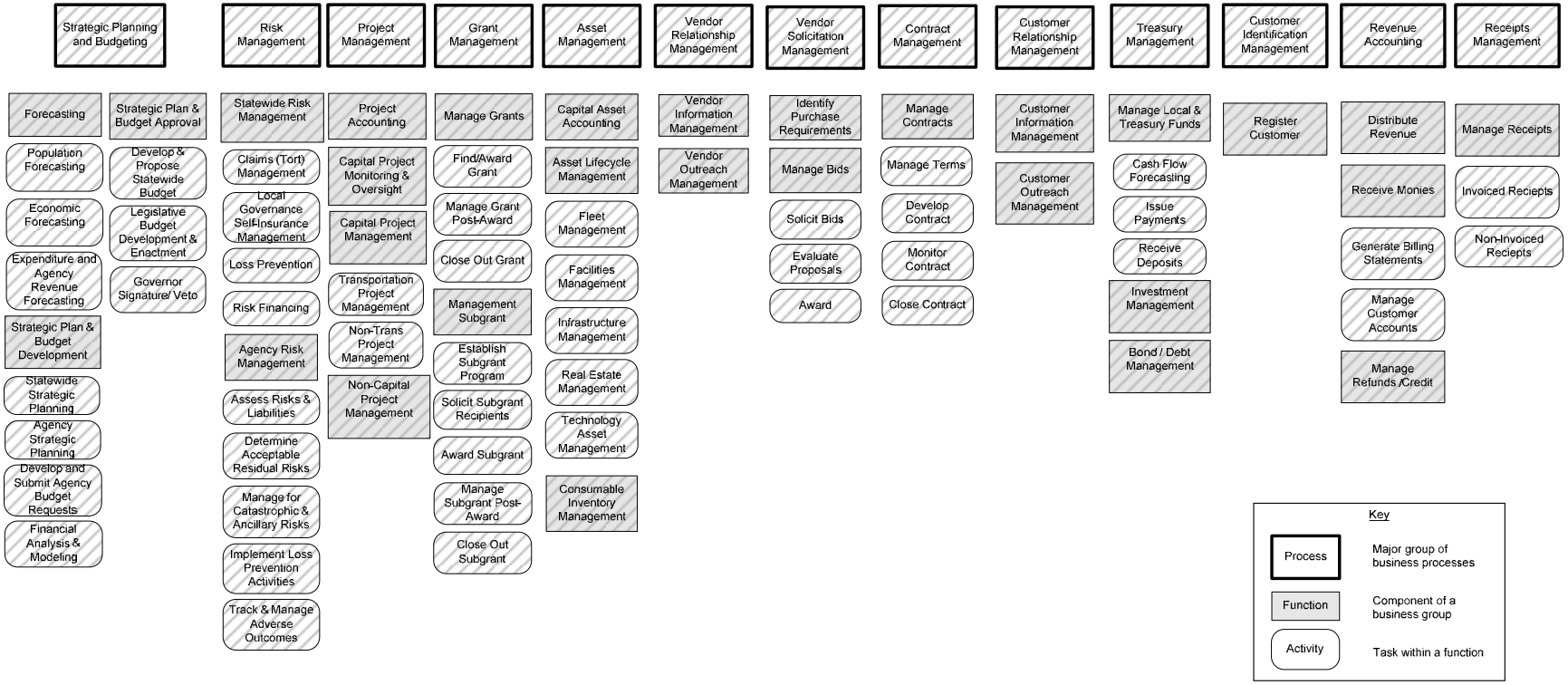
- **Training –** training is a key component to the success of proposed solution. Key activities include:
  - Project team training to include “SAP public sector boot camp”.
  - Key stakeholder training to include “SAP public sector boot camp”.
  - Appropriate technical training for core technical team and agency technical staff.
  - User training in software functions in support of revised business processes.
- **Infrastructure**
  - Installation of hardware and systems software and integration into the government network. Upgrading of agency networks where necessary to effectively use the solution will occur in the policy development period.

- **Conversion**
    - Conversion of data necessary for year-to-year comparison.

7.2.2 OUT-OF-SCOPE

- **Functionality –** The proposed solution does not include the functional components on the next page:

Figure 13: Out of Scope for Proposed Solution



7.3 PROJECT IMPLEMENTATION ASSUMPTIONS

Successful implementation of the *Roadmap is* based on the following assumptions:

- A strong, active statewide governance structure is in place;
- Positioning activities have been completed and evaluated;
- Line and central services agencies will be represented in the development, implementation, and ongoing operations of the proposed solution;
- If necessary to support the recommended software architecture, agencies will be on the state government network for at least 9 months prior to their scheduled implementation date of any new statewide systems;
- Agency requests for system upgrades and replacements will first be assessed for functionality within the SAP ERP. Systems that duplicate the functionality of SAP ERP will not be approved;
- Key statutory and policy changes required to support standardization of business practices, processes, and data requirements will be reviewed and in place prior to implementation of systems technology;
- Enterprise standards will be developed and adopted statewide to facilitate the use of efficient, effective processes and mitigate project risk;
- The state will co-partner with the ERP integrator on all planning, development, and implementation processes.
- The contracted ERP integrator will provide limited support after the last agency group goes live, it is anticipated that the state will be able to lead the continuing maintenance efforts;
- Timelines, phasing, and staffing estimates will need to be revisited once funding is approved and the position activities can be evaluated;
- The state will follow DIS guidelines for project management including but not limited to quality management, communication, integration management, change management, quality assurance, and policy development;
- The state's implementation team will have the subject matter expertise and the authority to make business decisions as described in the project plan on behalf of the State of Washington entity that they represent;
- The state's implementation team and key stakeholders will have completed appropriate application-specific training prior to the initiation of the initial phase of the project implementation;
- The objective of the implementation is to use standard, out-of-the-box functionality, with minimal customization of the package software; and
- The state will deploy the change management plan developed at the start of the initial phase of the project for all implementation phases.

8. ESTIMATED TIMEFRAME AND WORK PLAN

This section presents a suggested schedule and work plan for implementation of the proposed solution. This plan and timeline reflect the need for up-front positioning activities, the practical realities of a project this large, the judgment of the project team, and proven project management approaches used on similar projects. When the state decides to move forward with this initiative, the project plan should be reviewed and adjusted based on the most current information and priorities.

A high-level work plan is presented below in rolled-up Gantt chart form. A task list follows the chart and provides further detail. The proposed implementation timeframe for the *Roadmap* effort included in this feasibility study spans a six year period. The project includes the following phases:

- **Phase 1 – Positioning Activities**
  - July 2007 through June 2009 –
    - Focus on the completion of the following Positioning Activities:
      - Stabilize HRMS and AFRS interfaces
      - Further define enterprise and state direction
      - Expand existing governance structure to be more program-oriented
      - Complete Chart of Accounts and common data definition analysis to determine degree of consistent data requirements
      - Review state procurement rules, policies, and procedures and identify areas for potential streamlining
      - Complete, or remain engaged in, the implementation of major agency line-of-business systems
      - Move agencies toward established standards and approaches through review of existing laws, policies and processes
      - Analyze and document existing interface/integration
      - Begin preparations for the implementation of a strong Change Management Program
      - Begin assessment of agency capacity and readiness
      - Incorporate lessons learned from other states and the HRMS implementation
    - Establish an Enterprise Program Office (EPO)
    - Develop detailed requirements

  Note: Not all of these efforts will be completed during the 2007-09 Biennium; however, all should be well underway.

- **Phase 2 – Design and Configuration Activities**
  - July 2009 through January 2011 – before entering into Phase II, it will be critical that the EPO validates the readiness and capacity of the enterprise

and individual agencies to move forward. Upon completion of the readiness assessment the EPO will seek *Roadmap* Steering Committee approval to proceed with the following activities:

- Design a blueprint of the solution (includes architectural design and functional configuration)
  - Focus on people, process and technology
  - Finalize all requirements
- Conduct fit gap analysis that includes other system interfaces (both agency and higher-education)
- Continue policy and process re-engineering
- Continue program development, change management and implementation planning
- Design and implement enterprise integration with other independent systems (for example, treasury and payroll)
- Identify data conversion needs and plan the approach
- Configure and build the new solution in pilot mode
- Thoroughly test the pilot solution and interfaces
- Conduct initial data conversion
- Complete initial end-user training

- **Phase 3 – Agency Migration Activities**
  - January 2011 through June 2012 – before entering into Phase III, it will be critical that the EPO validates the readiness and capacity of the enterprise and individual agencies to move forward. Upon completion of the readiness assessment the EPO will seek *Roadmap* Steering Committee approval to proceed with the following activities:
    - Establish parallel production-ready "Target" new ERP environment, ready for staged roll-out:
      - Continue running AFRS and HRMS "as-is" systems; freeze all changes to these systems
      - Complete data conversion according to plan
      - Deploy a new Financial Environment, based on the new Chart of Accounts structure, including a new general ledger and a re-designed HRMS
      - Bridge AFRS and HRMS to the new Financial Environment for reporting purposes only
        - Interface would capture AFRS transactional data, transform it, and update the new Financial Environment
        - Interface would capture HRMS transactions, transform into redesigned new HRMS

- Bridge existing automated AFRS file-based interfaces to new Financial Environment, and implement processes for posting batch updates from Agency-based financial systems
- Test all financial reports from new environment against AFRS (which is still running in parallel)
- Test all payroll reports and processes from new environment against HRMS (which is still running in parallel)
- Certify new environment for Financial reporting and HR/Payroll

o Go Live with HR/payroll from the new ERP environment

- Refresh business and technical staff HR training just-in-time before "live"
- Transition HRMS users to the new ERP HR environment

o Go Live with financial reporting from the new ERP environment

- New environment still fed by AFRS
- New environment becomes reporting "system of record"

o Begin transition of AFRS users to new ERP environment

- Provide all necessary business and technical staff training just-in-time before "live"
- Shift existing AFRS users to the new ERP financials environment
  - For transitioned users, transaction entry moves from AFRS to new ERP
- When all agencies transitioned, turn off agency batch interfaces to AFRS; run to new environment only
- When all users transitioned, turn off transaction interface from AFRS to new environment
- Archive AFRS data and reporting programs; shut down AFRS transactions

o Enter stabilization period for new ERP environment

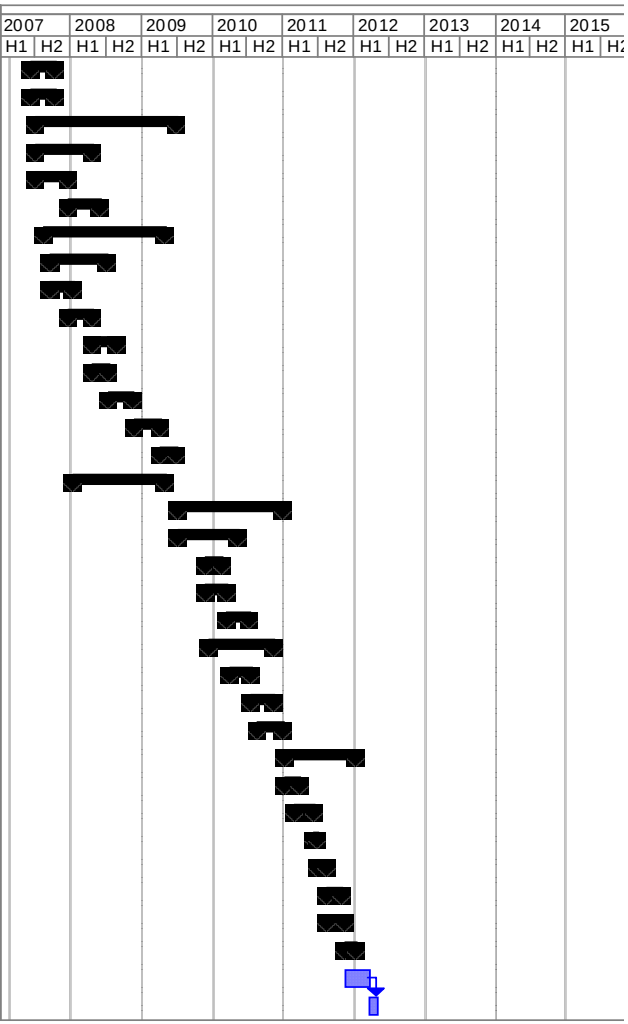
o Upon validation and stabilization the new Financial and HRMS ERP environment begin retiring the "as-is" AFRS and HRMS environments

- Existing HRMS server farm would be refreshed and readied to receive new ERP environment at an appropriate time

Major tasks are identified for each project phase. The work plan is designed to continuously collect and respond to customer input and will provide formal customer reviews at each milestone.

Figure 14: Proposed High-Level Work Plan

ID	ID	WBS	Task Name	Start
1	**1**	**1**	**Project Setup**	**Mon 6/4/07**
2	**2**	**1.1**	**Project Organization Staffing**	**Mon 6/4/07**
15	**15**	**2**	**Phase 1 -- Positioning Activities**	**Mon 7/2/07**
16	**16**	**2.1**	**Stabilize HRMS/AFRS Interfaces**	**Mon 7/2/07**
21	**21**	**2.2**	**Define/Clarify State Direction**	**Mon 7/2/07**
29	**29**	**2.3**	**Expand Existing Governance Structure**	**Mon 12/17/07**
34	**34**	**2.4**	**Review and Refine COA/Data Definitions**	**Mon 8/13/07**
44	**44**	**2.5**	**Review/Refine Procurement rules**	**Mon 9/10/07**
49	**49**	**2.6**	**Review Agency LOB Plans**	**Mon 9/10/07**
52	**52**	**2.7**	**Transition Agency policies and processes**	**Mon 12/17/07**
55	**55**	**2.8**	**Analyze and Document existing interfaces/integ**	**Mon 4/21/08**
58	**58**	**2.9**	**Prepare for Change Management**	**Mon 4/21/08**
61	**61**	**2.10**	**Begin Agency Readiness Assessment**	**Mon 7/14/08**
64	**64**	**2.11**	**Research and Incorporate Lessons Learned**	**Mon 11/17/08**
68	**68**	**2.12**	**Establish Ent Program Office (EPO)**	**Mon 4/6/09**
73	**73**	**2.13**	**Develop Detailed Requirements**	**Mon 1/7/08**
85	**85**	**3**	**Phase 2 -- Design and Configuration Activities**	**Mon 7/6/09**
86	**86**	**3.1**	**Blueprint the System**	**Mon 7/6/09**
99	**99**	**3.2**	**Conduct Fit/Gap Analysis with interfaces**	**Mon 11/23/09**
106	**106**	**3.3**	**Continue Policy and Process Re-engineering**	**Mon 11/23/09**
110	**110**	**3.4**	**Continue program development, change mgt an**	**Mon 3/15/10**
114	**114**	**3.5**	**Design and Implement integration w/ other syste**	**Mon 12/7/09**
125	**125**	**3.6**	**Identify Data Conversion Needs**	**Mon 3/29/10**
129	**129**	**3.7**	**Conversion Design and Development**	**Mon 7/19/10**
135	**135**	**3.8**	**Configure, Prototype and Test new System**	**Mon 8/16/10**
141	**141**	**4**	**Phase 3 -- Agency Migration Activities**	**Mon 1/3/11**
142	**142**	**4.1**	**Establish Target ERP Environment**	**Mon 1/3/11**
147	**147**	**4.2**	**Build\Realize Solution**	**Fri 2/25/11**
155	**155**	**4.3**	**Test the Solution**	**Mon 6/6/11**
161	**161**	**4.4**	**Bring up Target Environment**	**Fri 6/24/11**
168	**168**	**4.5**	**Move Payroll to new Environment**	**Mon 8/15/11**
173	**173**	**4.6**	**Move Financials to new Environment**	**Mon 8/15/11**
178	**178**	**4.7**	**Transition to Live on New System**	**Mon 11/14/11**
183	183	5	**Stabilize new ERP environment**	Mon 11/14/11
184	184	6	**Post-Implementation Review**	Mon 3/19/12



A detailed Project Plan can be found in Volume II, Appendix H.

9. COST BENEFIT ANALYSIS

This section describes the results of a formal Cost Benefit Analysis (CBA) performed as part of the feasibility study. It includes a description of the CBA development approach, assumptions used, a summary of the CBA results, and a detailed costs analysis.

CBA Approach

Three activities are necessary to complete the CBA:

1. **Determine baseline costs**
   - The *Roadmap* project took the following steps in identifying baseline costs:
     - Built a Current Annual Cost Baseline – Based on a sampling of 69 agencies;
     - Built a 10-year Current Cost Baseline Forecast – Based on the results of step 1, as required for the CBA worksheets.
2. **Determine one-time and on-going project costs for each viable alternative**
   - Constructed Project Implementation Cost Estimates for the two viable alternatives using a consistent framework of anticipated project costs.
3. **Complete the entry of baseline and project data into the CBA Worksheets**

Upon completion of the CBA it was determined that the *Roadmap* team would:

- Postpone the identification of project savings based on state experience with large system implementations and Executive Sponsors feedback. Numerous case studies and research articles have demonstrated that ERP implementations take a long time to stabilize before they begin to generate positive returns; given this long time horizon, it is premature to speculate about the degree of savings that might be achieved by the *Roadmap* project implementation;
- Assume baseline cost remain the same over the 10-year planning horizon;
- Estimate one-time and on-going costs for the two remaining viable alternatives:
  - Leverage AFRS
  - Leverage HRMS

Building the Current Annual Cost Baseline

The project team conducted a new cost survey to validate, re-baseline, and adjust annual cost assumptions. Survey results used to build the 2006 Baseline Cost Model came from the following 69 agencies and/or major divisions:

- 24 individual agencies surveyed in 2006;
- 7 divisions of DSHS surveyed in 2006;
- 38 small agencies and the Governor's Office, included in OFM's cost survey.

A list of these agencies and a summary of the 2006 Baseline Cost Model can be found in Volume II, Appendix I.

Leverage AFRS Cost Benefit Analysis (CBA) Assumptions

Estimating assumptions used in the cost benefit analysis for this alternative included:

- Projected labor costs for modifying and enhancing AFRS, as provided by OFM's AFRS support team;
- Various costs for commercial-off-the-shelf (COTS) software and other services needed to close key functionality gaps, which are:
  - Purchase of needed COTS modules to fill functionality gaps;
  - Costs required to implement enhanced application integration features that support more immediate transaction posting (and less batch processing), where appropriate;
  - Data conversion costs;
  - Costs of re-factoring the existing HRMS instance, e.g., turning on the embedded SAP general ledger modules and building additional agency interfaces;
- Costs of enhanced integration capabilities;
- Costs for enhanced data warehousing and management reporting features;
- Costs based on a detailed project staffing model showing custom development and COTS implementation tasks over a planned 6-year time span beginning in project year 3;
- Costs for 6 new servers to support the COTS purchases.

Assumptions did not include costs for the recommended "Positioning Activities", such as stabilizing the existing HRMS; model assumes these activities have been completed in advance of the project.

The project implementation cost model is shown on the following page. This model shows six years of the total ten-year project costs, beginning in project year three. Please refer to Volume II, Appendix J for full project cost details.

Table 8: Leverage AFRS Project Costs

Major Cost Components Leverage AFRS	Ref item no.	Reference to detail Workpapers	Yr 1 $'000's	Yr 2 $'000's	Yr 3 $'000's	Yr 4 $'000's	Yr 5 $'000's	Yr 6 $'000's	Total
Internal Staff Salary Costs	(1)	Staff Cost Breakdown:	$2,765,780	$3,700,580	$4,689,784	$4,344,577	$2,921,899	$2,996,183	$21,418,804
Includes:		Project	$1,200,000	$618,000	$636,540	$655,636	$675,305	$695,564	
- PMO		State-wide	$445,780	$445,780	$1,337,340	$891,560	$445,780	$445,780	
- Policy		Line Agency	$1,120,000	$988,800	$1,018,464	$1,049,018	$0	$0	
- Business Integra		Rollout Agency	$0	$1,648,000	$1,697,440	$1,748,363	$1,800,814	$1,854,839	
- Tech Integration									
- Change/Communication/Training									
- QA									
Project Infrastructure Costs	(2; 3; 4; 5)	Costing Breakdown: 1. Project Accomodation 2. Project Furniture and Equipment 3. Project Consumables 4. Project Technical Infrastructure	$283,000	$404,715	$404,407	$437,476	$422,910	$344,548	$2,297,056
Travel and Subsistence - Internal	(6; 12)	Costing Breakdown: 1. Project Team Visits 2. Project Straff Visits 3. Site Travel and Accomodation	$0	$0	$0	$0	$0	$0	$0
Other Costs	(7; 10; 11; 13)		$28,000	$83,240	$73,773	$87,950	$78,625	$37,302	$388,891
Implementation Consulting Costs	(8)	Integrator Resource Costs							$57,097,542
- Consulting Costs			$9,600,000	$9,888,000	$10,184,640	$10,490,179	$10,804,885	$5,564,516	
- Travelling Costs			$96,000	$98,880	$101,846	$104,902	$108,049	$55,645	
Project Outside Services	(9; 14)		$0	$0	$0	$0	$0	$0	$0
Hardware - (Servers) - (Site Infrastructure)	(15)	Technical Infrastructure Costing Breakdown	$70,000	$216,300	$222,789	$76,491	$0	$0	$585,580
SW Costs	(16)								$14,348,827
- Licence Fees			$1,125,000	$1,738,125	$2,387,025	$3,073,295	$2,532,395	$1,304,183	
- Maintenance Fees			$202,500	$312,863	$429,665	$553,193	$455,831	$234,753	
Total Costs			$14,170,280	$16,442,703	$18,493,929	$19,168,063	$17,324,594	$10,537,131	**$96,136,699**

Leverage HRMS CBA Assumptions

Estimating assumptions used in the cost benefit analysis for this alternative included:

- Costs of upgrading existing SAP HRMS software licenses, roughly $15.5 million;
- Personnel costs based on a detailed project staffing model patterned after a typical ERP implementation over a 6-year time span beginning in project year 3;
- Costs for 29 new servers; assumes reuse of existing HRMS servers (22 in place today).

These assumptions did not include costs for the recommended “Positioning Activities”, such as stabilizing the existing HRMS; model assumes these activities have been completed in advance of the project.

The project implementation cost model is shown on the following page. This model shows six years of the total ten-year project costs, beginning in project year three. Please refer to Volume II, Appendix J for full project cost details.

Table 9: Leverage HRMS Project Costs

Major Cost Components Leverage HRMS	**Ref item no.**	**Reference to detail Workpapers**	**Yr 1 $'000's**	**Yr 2 $'000's**	**Yr 3 $'000's**	**Yr 4 $'000's**	**Yr 5 $'000's**	**Yr 6 $'000's**	**Total**
Internal Staff Salary Costs	(1)	Staff Cost Breakdown:	$5,600,000	$7,704,400	$4,880,140	$5,026,544	$5,177,341	$3,477,822	$31,866,247
Includes:		Project	$1,200,000	$618,000	$636,540	$655,636	$675,305	$695,564	
- PMO		State-wide	$2,320,000	$1,730,400	$0	$0	$0	$0	
- Policy		Line Agency	$2,080,000	$1,648,000	$0	$0	$0	$0	
- Business Integra		Rollout Agency	$0	$3,708,000	$4,243,600	$4,370,908	$4,502,035	$2,782,258	
- Tech Integration									
- Change/Communication/Training									
- QA									
Project Infrastructure Costs	(2; 3; 4; 5)	Costing Breakdown: 1. Project Accomodation 2. Project Furniture and Equipment 3. Project Consumables 4. Project Technical Infrastructure	$747,350	$485,012	$567,820	$484,409	$568,791	$389,934	$3,243,314
Travel and Subsistence - Internal	(6; 12)	Costing Breakdown: 1. Project Team Visits 2. Project Straff Visits 3. Site Travel and Accomodation	$0	$0	$0	$0	$0	$0	$0
Other Costs	(7; 10; 11; 13)		$242,000	$60,820	$102,559	$65,721	$107,607	$3,683	$582,390
Implementation Consulting Costs	(8)	Integrator Resource Costs							$78,142,949
- Consulting Costs			$21,600,000	$22,660,000	$8,911,560	$9,178,907	$9,454,274	$5,564,516	
- Travelling Costs			$216,000	$226,600	$89,116	$91,789	$94,543	$55,645	
Project Outside Services	(9; 14)		$0	$0	$0	$0	$0	$0	$0
Hardware - (Servers) - (Site Infrastructure)	(15)	Technical Infrastructure Costing Breakdown	$210,000	$360,500	$371,315	$76,491	$78,786	$0	$1,097,092
SW Costs	(16)								$31,886,282
- Licence Fees			$2,500,000	$3,862,500	$5,304,500	$6,829,544	$5,627,544	$2,898,185	
- Maintenance Fees			$450,000	$695,250	$954,810	$1,229,318	$1,012,958	$521,673	
Total Costs			$31,565,350	$36,055,082	$21,181,819	$22,982,723	$22,121,842	$12,911,458	**$146,818,274**

Alternatives Cost Analysis

The long-term impact of these alternatives on the state's current cost projection is shown below:

1. Leverage AFRS
    - One-time costs – $96 million project costs, years 3 through 8
    - On-going costs – Additional $250,000 software maintenance costs resulting from purchased software licenses, beginning in year 9, increasing with inflation
2. Leverage HRMS
    - One-time costs – $147 million project costs, years 3 through 8
    - On-going costs – Additional $550,000 software maintenance costs resulting from purchased software licenses, beginning in year 9, increasing with inflation

It should be noted that long-term software maintenance costs can be reduced somewhat depending on:

1. The state's buying power and leverage with the prospective vendors, and
2. The length of each maintenance agreement, which may allow the State to lock in a fixed cost or lower rate of increase.

Completing the Cost Benefit Worksheets

Finally, data from the project cost models for each alternative were transferred into Washington State ISB Cost Benefit Worksheets, which can be found in Volume II, Appendix J. These spreadsheets compute a standardized view of cost/benefit ratios and net present value.

The ISB's Feasibility Study Guidelines for Information Technology Investments contain a set of Cost Benefit Analysis Forms for use in comparing the costs and tangible benefits among IT project alternatives. The tables on the following pages summarize the results of the Cost Benefit Analysis for the two alternatives (compared to the baseline costs for business as usual).

Table 10: Leverage AFRS CBA Summary

Form 1/ Summary, Cost Benefit and Cash Flow Analysis Agency Office of Financial Management Leverage AFRS

04-Jan-07

	FY 2007	FY 2,008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	GRAND TOTAL
TOTAL OUTFLOWS	0	0	14,170,280	16,442,703	18,048,149	19,168,063	17,324,594	10,537,131	241,796	249,049	96,181,764
TOTAL INFLOWS	0	0	0	0	0	0	0	0	0	0	0
NET CASH FLOW	0	0	(14,170,280)	(16,442,703)	(18,048,149)	(19,168,063)	(17,324,594)	(10,537,131)	(241,796)	(249,049)	
INCREMENTAL NPV	NA	0	(11,813,854)	(24,715,867)	(38,044,572)	(51,367,651)	(62,701,058)	(69,188,759)	(69,328,876)	(69,464,706)	
Cumulative Costs	NA	0	14,170,280	30,612,983	48,661,131	67,829,194	85,153,788	95,690,919	95,932,715	96,181,764	
Cumulative Benefits	NA	0	0	0	0	0	0	0	0	0	

Cost of Capital	Breakeven Period - yrs.*		NPV $	IRR %
	Non-Discounted	Discounted		
6.25%			(69,464,706)	N/A

* - "Non-Discounted" represents breakeven period for cumulative costs and benefits (no consideration of time value of money).
* - "Discounted" considers effect of time value of money through incremental Net Present Value.

Table 11: Leverage HRMS CBA Summary

Form 1/ Summary, Cost Benefit and Cash Flow Analysis Agency Office of Financial Management Leverage HRMS

04-Jan-07

	FY 2007	FY 2,008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	GRAND TOTAL
TOTAL OUTFLOWS	0	0	31,565,350	36,055,082	21,181,819	22,982,723	22,121,842	12,911,458	537,324	553,443	147,909,041
TOTAL INFLOWS	0	0	0	0	0	0	0	0	0	0	0
NET CASH FLOW	0	0	(31,565,350)	(36,055,082)	(21,181,819)	(22,982,723)	(22,121,842)	(12,911,458)	(537,324)	(553,443)	
INCREMENTAL NPV	NA	0	(26,316,237)	(54,607,395)	(70,250,342)	(86,224,863)	(100,696,535)	(108,646,108)	(108,957,477)	(109,259,322)	
Cumulative Costs	NA	0	31,565,350	67,620,432	88,802,251	111,784,973	133,906,816	146,818,274	147,355,598	147,909,041	
Cumulative Benefits	NA	0	0	0	0	0	0	0	0	0	

Cost of Capital	Breakeven Period - yrs.*		NPV $	IRR %
	Non-Discounted	Discounted		
6.25%			(109,259,322)	N/A

* - "Non-Discounted" represents breakeven period for cumulative costs and benefits (no consideration of time value of money).
* - "Discounted" considers effect of time value of money through incremental Net Present Value.

Project Funding

Several budget decision packages have been prepared and submitted to support a portion of the recommended Positioning Activities.

Detailed Benefits

There are significant business benefits that would result from the implementation of Leverage HRMS. Benefits will be achieved over time through:

- Increased use of e-commerce and automated methods of exchanging funds (i.e., invoices and vendor payments);
- Reduced staff hours performing routine data entry tasks, and redeployment of staff to more high-valued activities such as data analysis etc.;
- Reduced maintenance and support devoted to agency-unique financial and administrative systems;
    - To the extent that agencies use the new system to perform these functions, current systems could be eliminated and future systems investments avoided;
- Full, current picture of program, agency, and statewide costs based on more complete cost data;
    - The state would be able to evaluate which services might be cost-effectively out-sourced to private companies or employee business units;
- Timely access to program outcome information, leading to more timely and accurate measures of performance;
- Comparable financial and performance information across programs and agencies;
- Improved access to accurate and timely financial information for management and budgetary data analysis, and information such as trend analyses, projections, and impact summaries;
- Economies of scale from adoption of shared services;
- Lower risk of contracting with or hiring poor performing vendors and providers through improved vendor cost data and performance histories;
- Increased system reliability through replacement of outdated technology;
- Enhanced flexibility to meet significant and ongoing changes expected in Washington's financial and administrative system needs throughout the coming years (e.g. improved ability to meet legislative and federal timelines and mandates for new laws and modifications of existing laws or policies);
- Ability to take advantage of vendor software and system enhancements resulting from research and development;
- Potential ability to attract and retain new system support staff to replace those who are retiring;
- Transferable resources due to wider adoption of standardized processes and systems;
- More efficient and effective management through the use of established best practices over time;

- Improved efficiency by eliminating collection, data entry, and maintenance of redundant data;
- Increased consistency and tracking through use of system-wide rules and exposure of rules to configuration capabilities;
- Improved ability to interface electronically with existing federal programs.

10. RISK MANAGEMENT

"Problems worthy of attack prove their worth by fighting back."
- Paul Erdos, Hungarian Mathematician (1913-1996)

Providing accessible, specific, and current information about the cost and outcomes of the work of government cannot be accomplished without a certain amount of risk, only some of which can be avoided.

To have the best chance of success, Washington must have a strong, system-wide approach to mitigating the risks associated with the *Roadmap*. Risk can be defined as "the threat or possibility that an action or event will adversely or beneficially affect an organization's ability to achieve its objectives".[9]

Risk management is the process of identifying, developing plans for, and dealing with uncertainty on a project. The *Roadmap* contains significant risk because of its scope, change management implications, and political visibility. This section provides a risk management plan and an initial assessment of the project risks.

10.1 RISK MANAGEMENT PLAN

This sub-section describes the plan for managing project risks during the implementation phase of the *Roadmap*. The plan to manage risks consists of a process to: assess risks, develop strategies to reduce the likelihood or consequences of the risk, and a process to monitor and mitigate risks.

10.1.1 RISK ASSESSMENT

The first component of any risk management plan is to continually identify, analyze, and prioritize risks as the project progresses. The risk assessment process includes a review and determination of whether the identified risks are acceptable. Risk assessment is not a one-time event since new risks could be identified at any time and previously identified risks need to be monitored; risks should be assessed monthly or more frequently throughout the project.

Risk Identification

The following tools should be used to aid in the identification of risks:

- ISB risk management guidelines and tools;
- Project Management Institute categories and examples of IT project risks;
- Historical information – Lessons learned from previous Washington State projects;
- Best Practice – Review of risks faced by others on similar projects;
- Project team brainstorming through regular facilitated risk identification and analysis sessions to include representatives from project management, IT management, end users, software vendor, and integrator management;
- Input from the project quality assurance consultants;
- Identification of and interviews with key stakeholders.

[9] Higher Education Funding Council for England, Publications HEFCE 01/24, Risk Management: A briefing for governors and senior managers, 2001

Risk Analysis and Quantification

During facilitated risk analysis and quantification sessions, risks are identified and evaluated across the entire scope of the project. Risks should be discussed and explored so that each is understood by all risk representatives. A Risk Management worksheet should be created and maintained that contains the results of the facilitation session, and documents the sources of risk and risk events that the participants discussed.

Risk Prioritization

As part of the facilitated discussion the group should assign a rating for the likelihood and consequences/impact to program mission and business objectives of each identified risk. The relative priority of addressing each risk should be assessed based on the likelihood and impact that the risk has on the project relative to other identified risks.

10.1.2 Risk Response

As risks are identified and prioritized, a plan to respond to specific risks should be developed with the level of detail dependent upon the risk's priority rating. In order to develop an appropriate risk response, the risk management team must first understand constraining factors such as the degree of project flexibility, the possibility of additional resource availability and the relative risk tolerance of project sponsors. Each recognized risk should be assigned a response approach category that identifies appropriate response actions. The response categories are as follows:

- **Avoidance.** Risk avoidance involves eliminating the risk by eliminating the cause or by using an alternate approach that does not involve the risk.
- **Mitigation.** Risk mitigation involves taking action to lower the likelihood of occurrence and/or the severity of the consequences.
- **Acceptance.** Risk acceptance involves accepting the possibility that the risk will occur and accepting the potential of the consequences as part of unavoidable cost of the project.
- **Sharing.** Risk sharing involves shifting some of the risk or risky activities to others, such as contractors, and accepting the remainder.

The risk management activities described above are documented in the risk management plan:

- **Risk Management Plan -** The EPO Program Director and the project manager should be responsible for the risk management plan. The plan should document the risk identification and prioritization process, document the identified risks, provide a structure for monitoring risk triggers, and the responses to the identified risks. The risk management team should share the plan and present the findings to the *Roadmap* Steering Committee regularly throughout the project.

Risk Tracking and Control

The risk management team will be responsible for establishing and maintaining risk status information, defining action plans, and taking corrective action when appropriate. In addition, the quality assurance consultants are expected to assist in monitoring the project for risks.

The project should formally review risks on a monthly basis and use the Risk Management Plan to respond to risk events throughout the life of the project. The tools used to monitor risk include project management software to identify potentially

impacted project activities situated on the critical path, a risk management plan, and risk management worksheets. Additionally, metrics for measuring performance and progress toward resolving risks should be established and maintained.

Risk control uses the risk management plan to respond to the risk events throughout the duration of the project. As changes occur, identification, quantification, and response are continuously re-examined. Some risk control techniques to be used are as follows:

- **Perform preventive action.** This action uses the risk management plan as a guide to proactively reduce or eliminate the probability or impact of a risk event occurring.
- **Perform corrective action.** This action uses the risk management plan as a guide to performing the planned risk response should a risk event occur.
- **Update the Risk Management Plan.** As the project changes, anticipated risks either occur or fail to occur. As risk event effects are evaluated or new risks emerge, the risk management plan must be updated to reflect these changes.

10.2 INITIAL RISK ASSESSMENT

Considering the breadth and depth of this endeavor and the DIS guidelines for criteria and severity, the risk assessment for the *Roadmap* project results in a recommendation of Level 3 oversight.

Level 3: Investments at this level are subject to full ISB oversight, which includes DIS' Management and Oversight of Strategic Technologies Division (MOSTD), written reports to the ISB, periodic status reports to the ISB by the agency director and staff, and submission of other reports as directed by the ISB.

At this level, the agency shall provide copies of key project documents, including the feasibility study, project external quality assurance reports, project management plans, risk management plans, change management plans, and closeout and evaluation reports to its MOSTD consultant as staff to the Board. The MOSTD consultant participates in all steering committee and project status meetings. The agency shall include all Level 3 investments in its IT portfolio.

The level of project oversight required by the ISB is determined by completing the ISB's Project Severity Level and Project Risk Level matrices, then comparing the results to the oversight standards established by the ISB. Volume II, Appendix K presents the standard risk matrices.

The risk criteria provide a mechanism to help gauge the impact of the project on the organization or enterprise, the level of effort needed to complete the project, the stability of the proposed technology, and agency preparedness. The severity criteria help to gauge the proposed project's impact on citizens and state operations, its visibility, and the consequences of doing nothing. The factors contributing to this recommendation are:

Risk Assessment – High

Functional impact on business processes or rules – High

Development effort and resources – High

Technology – Medium

Capability & management – High

Severity Assessment – High

Impact on other agencies and the public – High

Visibility – High

Impact on state operations – High

Failure or nil consequences – High

Only the risk assessment for technology is rated less than high. This rating is consistent with the information from the Gartner Hype Cycle for Government 2006, which indicates that government ERP solutions are transitioning from the "slope of enlightenment" to the "plateau of productivity".

In an issue brief dated May 2006, the National Association of State Chief Information Officers indicates that "getting IT right is becoming more crucial than ever for governments in meeting the demands of citizens, businesses, and employees who are expecting the same high level of service they are receiving from commercial ventures". Washington's *Roadmap* must succeed in order to update the enterprise IT architecture and provide a business process integration framework that agencies will leverage well into the future. To secure a positive outcome, Washington must have a comprehensive and succinct risk management approach.

The initial and most "important factors in reducing risk relate(s) to identifying and mitigating risk factors"[10]. Many of the anticipated risks for the *Roadmap* relate to people.

The *Roadmap* team conducted a preliminary risk and mitigation analysis in order to determine where the project risks stand today. It is anticipated that periodic risk analysis will be performed. Project risks and proposed mitigation strategies for this project include:

- ***Ensuring executive sponsorship*** – In addition to the Executive Sponsors, the *Roadmap* requires leadership from both the state's Chief Executive Officer (the Governor) and the citizen's representatives (the Legislature). This leadership must be maintained across election cycles and budgets.
    - Mitigation Strategy – The project and ongoing operations governance structure for the *Roadmap* places the overall responsibility for the effort on the *Roadmap* Steering Committee. This committee will consist of representatives from central service and line agencies and will provide stakeholder and agency representation in the decision process. The combination of executive leadership and broad statewide participation (through the various teams) helps to ensure preparedness and eases assimilation of the project into the ongoing culture and business of government.
- ***Managing an effort of this size and complexity*** – The *Roadmap* is among the largest business and technology projects undertaken by the State of Washington. The *Roadmap* program will involve all agencies, including higher education, that are required to report into a statewide financial system. This program will change

[10] ERP and Financial Management Systems, The Backbone of Digital Government, the Government Finance Officers Association of the United States and Canada, 2001

the way many state employees do their job, the way managers make decisions, and the way legislators receive information. It will impact policies, processes, systems, and data.

  - Mitigation Strategy – The project plan dedicates project management resources statewide and the implementation partners and the organizational approach to the *Roadmap* relies on staffing. Agencies will be asked to contribute project staff and subject matter experts throughout the project lifecycle. This management structure provides a strong base from which to implement significant change.

    ISB status reporting and oversight, along with a significant quality assurance effort will provide an ever-present outside perspective for the *Roadmap* leaders and managers.

- ***Maintaining ongoing, clear, consistent communication with stakeholders, sponsors, and project participants*** – The *Roadmap* is not a technology project. It is a business process change project using technology as a catalyst for implementing change. "It is imperative that staff have a thorough understanding of the business case"[11] for the project and receive systematic and timely communications about planned changes to the policies, processes, systems and data that support their job functions. When people know more, they participate more effectively and they assimilate change with less resistance. Maintaining consistent, structured communications for all target audiences throughout the project requires dedicated, skilled staff.

  - Mitigation Strategy – The project and ongoing operations organizational approach highlights change management as a specific area of focus. This area should be staffed with change agents and expert communicators whose focus will be on educating stakeholders, executives, and staff on project objectives, status, and results, both generally and for targeted areas. Communications will be focused on reducing the potential for misconceptions about the project between both business and technical agency staff.

- ***Addressing significant resistance to change –*** The *Roadmap* is about changing how Washington does the work of government, how staff approaches their constituents, customers, and their job functions. People have become comfortable with the status quo even though it may not be optimal and are resistant to the unknown. The *Roadmap* must acknowledge and address human anxiety about change to prevent undermining project efforts. This commitment to addressing human resistance must not compromise the project's focus on implementing consistent best practices – otherwise, agency variation and functional duplication will proliferate and diminish the overall result.

  - Mitigation Strategy – As stated above, the project and ongoing operations organizational approach highlights change management as a specific area of focus. Gartner recently recommended that more than half of the customer-facing side of an IT project budget be dedicated to change management. Quality assurance efforts will be targeted to this area

[11] ERP and Financial Management Systems, The Backbone of Digital Government, the Government Finance Officers Association of the United States and Canada, 2001

specifically to ensure that emerging issues are addressed constructively and promptly.

- ***Guaranteeing funding across multiple biennia*** – Washington's funding model provides spending authority one biennium at a time. The *Roadmap* will span at least three biennia. This feasibility study includes cost estimates for implementation activities in each of these budget cycles. Over the six years there will be at least one governor election cycle and three legislative election cycles. Without commitment for fiscal support through these potential leadership changes, the *Roadmap* might not deliver the expected results.
    - Mitigation Strategy – Washington will need to commit to long term funding of the project through the use of internal budget dollars and external financing in the initial biennium and then external financing for the remainder of the project. After system implementation, Washington could recapture financed dollars through fees charged to agencies for shared services and enterprise systems, if necessary.

Lastly, the *Roadmap* risk management plan must promote a culture and philosophy among all participants that says everyone is a risk manager. Project leaders must understand risk management approach and mitigation strategies in order to be aware of and support risk management. By managing risk, the *Roadmap* is more likely to achieve its objectives.[12]

[12] Best Practices in Risk Management: Private and Public Sectors Internationally, Treasury Board of Canada, Secretariat

11. *ROADMAP* ADVISORY GROUP PARTICIPANTS BY AGENCY

Department of Agriculture

Mark Johnson

Department of Corrections

Denise Doty
Gary Maciejewski

Department of Employment Security

Thomas Bynum
Jack Needham

Department of General Administration

Dale Abersold
Fay Bronson
Phil Grigg
Tristan Wise

Department of Information Services

Scott Came
Tom Parma
Connie Robins
Chuck Smith

Department of Labor and Industries

Rex Garrett
Cynthia Harris

Department of Personnel

Machelle Gentry
Ila Kowlaski
Tom Miller
Scott Turner
Steve Young

Department of Retirement Systems

Dave Nelson
Debbie Ocheltree
Lyle Tillett

Department of Revenue

Dan Contris
George Alvarado

Department of Social and Health Services

Dan Ashby
Rick Cook
Stan Marshburn
Mariann Schols

Department of Transportation

Rob Threlkeld
Marcy Yates

Liquor Control Board

Randy Simmons
Craig Wilson

Office of Financial Management

Derek Basham
Susan Dodson
Bruce Gorsky
Wendy Jarrett
Dennis Jones
Margaret Ann Lee-Harvison
Lynne McGuire
Michelle Paul
Sadie Rodriguez-Hawkins
Kathy Rosmond
Pat Sanborn
Allen Schmidt

Office of the State Treasurer

Darrel Jensen
Marla Kentfield

Office of the Superintendent of Public Instruction

Renee Lewis

Washington State Health Care Authority

Stephanie Atkins
Michael DeAngelo

Washington State Lottery

Tom Dahmers
Beckie Foster

Washington State Patrol

Sue Fleener
Maria Hug
Diane Perry

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13. ACRONYMS

ADDS – AFRS Data Distribution System
AFRS – Agency Financial Reporting System
AAG – Agency Advisory Group
BAIAS – Benefit Administration and Insurance Accounting System
CAFR – Comprehensive Annual Financial Report
CBA – Cost Benefit Analysis
COTS – Commercial off the shelf
DB2 – IBM mainframe data base system
DIS – Department of Information Services
DOP – Department of Personnel
DOT – Department of Transportation
DRS – Disbursement Reporting System
EA Advisors – Enterprise architecture advisors
EFT – Electronic funds transfer
EPO – Enterprise Program Office
ER – Enterprise Reporting
ERP – Enterprise Resource Planning
ERP System – Enterprise resource planning system is multi-module application software that integrates activities across functional departments
FTbx – Financial Toolbox
GA – Department of General Administration
GAAP – Generally Accepted Accounting Principles
GFOA – Government Finance Officers Association
GMAP – Government Management Accountability and Performance
HCA – Health Care Authority
HR – Human Resources
HRMS – Human Resource Management System
ISB – Information Services Board
IT – Information technology
KPMG STARS – Financial accounting system on which AFRS is based
LEAP – Legislative Evaluation and Accountability Program

MOSTD – DIS's Management and Oversight of Strategic Technologies Division
OFM – Office of Financial Management
OMNI – Department of Corrections' Offender Management Network Information project
PMTS – Performance Measurement Tracking System
POG – Priorities of Government
PoI – Policy Development
Provider One – Department of Health and Social Services' system that tracks claims and spending in many medical and a few non-medical areas formerly known as MMIS (Medicaid Management Information System)
RCW – Revised Code of Washington
PSRA – Personnel System Reform Act
R&D – Research and development
ROI – Return on investment
SAAM – State Administrative and Accounting Manual
SAP – Company founded in 1972 as **S**ystems **A**pplications and **P**roducts in Data Processing
SI – Systems integrator
TMS – Time Management System